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"For many fortunate discoveries in medicine, and for the detection of numerous "errors, the world is indebted to the rapid circulation of Monthly Journals; "and there never existed any work to which the Faculty in EUROPE and "AMERICA were under deeper obligations than to the Medical and Physical "Journal of London, now forming a long, but an invaluable, series." RUSH.

Original Communications.

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

*A Sketch of the History of the Use of Blood-letting as a Remedy for Disease.** By Δ.

IN tracing the history of the use of blood-letting as a remedy for disease, we can rise only to the source whence the nations of Europe, thirty ages since, derived the origin of their knowledge in science as well as in the arts, and which, successively cultivated by ensuing generations, has raised us to a degree of eminence in the scale of intellectual nature that has probably never been excelled. It is from the Egyptians, through the medium of the Greeks, that we derive the use of this, the most powerful of all our measures for the alleviation of disease.

The invention of the processes of most of the arts has, in the eyes of barbarous nations, appeared so wonderful an effort, that they have in general either attributed them to supernatural powers, or to imitation of the instinctive actions of brute animals, which have been considered to be under the immediate direction of similar agents. Thus, the origin of the use of blood-letting is referred by Egyptian tradition to the *hippopotamus*, who, when sick, is said to seek a sharp-pointed reed, with which he wounds a vein of one of his limbs, and thus induces an emission of blood. But it is more probable that the practice originated from the same source as nearly the whole of the other instances of the relative power of man over the operations of nature,—inductive and analogical reasoning. Men, observing the good effects of spontaneous evacuation of blood in various diseases, were thence induced to imitate them by art.

* This is one of the few medical subjects which have not been treated of in this Journal in a historical, as well as in a theoretical and practical, manner: this sketch will, then, we consider, be received with pleasure by our readers, as an essay to supply the deficiency on the subject of blood-letting.—EDIT.

The earliest account of the use of this remedy is conveyed to us by the writings of STEPHEN of Byzantium, who relates that PODALIRIUS, on returning from the siege of Troy, was thrown on the coast of Caria, where he relieved SYRNA, the daughter of king DAMÆTHUS, from the ill consequences of a fall from a house, by bleeding her in both arms: and, what seems to show the novelty of the practice at that period, the physician received the hand of Syrna as the reward of his services. A blank of seven hundred years then ensues in the history of the application of this measure; but, after that interval, we find the records of it in the works of HIPPOCRATES.*

Hippocrates speaks of blood-letting as a common remedy, and of its being effected by means of scarification and the cupping-glass, as well as by opening arteries and veins. The Grecian physicians probably derived the use of the former measure also from the Egyptians, whom HERODOTUS reports to have adopted it, as well as PROSPER ALPINUS, who also gives a description of the instruments they employed in its execution. But we also trace the use of this mode of blood-letting in other civilized nations of antiquity, and amongst many uncultivated savage tribes. In the way of *acupuncturation*, it was resorted to at a very remote period by the Japanese and Chinese; and is commonly employed by the natives of America† and by the Hottentots.‡

Believing certain vessels to be particularly connected with certain viscera, much importance was attributed by Hippocrates to the choice of the vein, as well as the region of the body from which the blood should be drawn. In general, a convenient one as near as possible to the seat of the disease was chosen; in the

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* HERODICUS, who preceded Hippocrates, seems to have confined the art of medicine to regulations of gymnastic exercise. He observed the extraordinary strength of body acquired by those who displayed their powers in the olympic games; and that those who had been sickly and feeble, often by those measures acquired health and vigour. PLATO also relates, that Herodicus had himself suffered a disease considered to be incurable, from which he had been delivered by practising the exercises of his own academy, (for he had previously been the director of a palestrum:) from this time he devoted his whole attention to the regulation of a system of gymnastic exercises, solely of medical application. GALEN says, that his rules were in many respects well adapted for prophylactic means, and bore a proper relation to the temperament, age, sex, climate, and season, attendant on the disease to which they were to be applied. He seems, however, to have been led into some excesses by his enthusiasm for his favourite measure; for a common direction to his patients was, to go from Athens to Eleusis, passing by Megara, a distance of nearly fifty miles, without either rest or food.

† See *Dampier's Voyages.*

‡ See *Histoire générale des Voyages*, tom. xviii. c. 14. See also *Mantissa schematica de Acupunctura* (cum icone instrumenti); *ad Dissert. de Arthritide*, auctore G. RHYNE, 8vo. Londini, 1683; and *De Puncto, Dissert.* Lugdun. Batav. auct. J. BIDLOO, 1709. For the observations of HIPPOCRATES on scarification and cupping, see his book Περὶ 'Ιητρῦ, § vi. and vii.

superior extremities, when the malady was above the division of the body formed by the diaphragm; and in the lower extremities, in those below it. In inflammatory affections of the throat, he opened the veins of the tongue; and in pains of the head, vertigo, &c. those of the forehead, or on the sides of the nose. The basilic vein correspondent with the affected side, was chosen in pleurisy; and the same vessel of the left arm, in diseases of the spleen. The blood, in inflammatory affections, was generally permitted to flow until it changed in colour,—that is, assumed the florid hue;* or until syncope was produced. It was resorted to in almost all violent pains, inflammations, and ardent fever, when the age and strength of the patient permitted.

The most distinguished of the immediate successors and disciples of Hippocrates, DIOCLES, chief of the dogmatic sect, followed in general the precepts of his master in the use of this remedy; but subsequent physicians did not so readily forego the doctrines of their hypotheses, to be guided in practice by the results of experience. CHRYSIPPUS of Gnidos abrogated the use of blood-letting; and the most celebrated of his sectaries, ERASISTRATUS, rarely resorted to it except in cases of hæmorrhage: yet Erasistratus was rather inclined to follow the conduct of the Empirics, had made several discoveries in anatomy, and first formed rational notions respecting the nature of inflammation, which he attributed to increased action of the small arteries; and this he also considered to be the essential origin of fever. To avoid the use of blood-letting, he had recourse to ligatures to the extremities, very restricted diet, emetics, and purgatives; and gymnastic exercises.

But a revolution again ensued, from the authority of a man whose glory is coæval with the subsequent records of the history of his art. HEROPHILUS restored the use of bleeding in inflammations, especially those of the throat and thoracic organs, and in many diseases accompanied with much severity of pain; but his practice in this respect seems to have been timid, though guided by the precepts of some celebrated empirics, particularly ACRON, SERAPION, and PHILINUS. This was the time of the chief reign of what may be termed rational empiricism. Those physicians, and their disciples, took much pains to graduate the doses of remedies; they witnessed their administration, and chose the most appropriate periods for doing it; and carefully directed the regimen that should be followed under their operation. They considered that it was sufficient that experience had pointed out the appropriate medicines, to lead to the

* This almost universally takes place, after from ten to fifteen or twenty ounces have been drawn from a vein in a moderate-sized stream.

administration of them to their patients: they left reasoning to the dogmatists; saying, that chance led to the discovery of remedies; that different trials of them had established their use, which had been preserved by tradition; and that comparison, and the analogy and relations discerned between a known and an unknown disease, might serve for guides to physicians in extraordinary cases. Such also was the method of HERACLIDES of Tarentum; who, according to Galen, never made an assertion contrary to truth, even to defend the interests of his sect, and who never related what he had not himself observed. Heraclides, however, employed bleeding more freely than his immediate predecessors: he commonly resorted to it in phrenitis, cynanche, epilepsy, gout, syncope, and the diseases of the heart in general.

The course of this history now leads us to a very important epoch in the annals of our art,—that of the first peaceable establishment of a physician at Rome in the person of ASCLEPIADES, a reformer of medical theory hardly inferior in celebrity to HIPPOCRATES, GALEN, or even BOERHAAVE.

Asclepiades was a native of Prusia in Bythinia. He first appeared in Rome as a teacher of rhetoric, but he soon devoted himself solely to the practice of medicine; and here his powerful genius triumphed over every obstacle. He formed a new system of doctrine, composed of a selection from the principal dogmas of the different sects which had flourished in Greece, embellished by all the splendour with which genius and eloquence could adorn them; and the people that an age previously had expelled Archagatus from their city, now became justly proud of a man who made Rome the centre of knowledge of this branch of science, and overshaded even the glory of the founder of the Cosian school. But Asclepiades owed much of his reputation to the fortunate situation in which he was placed, and to his powers as a logician; though some of his physiological views were accurate and original, and several of his dogmas have been advanced under different forms at various succeeding periods, and are admitted at the present day. He believed the chief causes of disease to consist in obstruction of the minute vessels of the body; and that, when this congestion amounted to a considerable extent, inflammation was the result: active exercise was here his chief remedy. He also maintained, that one diseased action is to be averted by the interposition of another. These notions, carried to excess in their application, led him to resort but little to the use of blood-letting. He recommended exercise on horseback even in ardent fevers, and an abstinence from all liquids during the first few days of the disease, that the strength of the body might be exhausted, and depletion of the vessels be thus effected. He only employed

bleeding in cases of intense pain, convulsions, and hæmorrhage. The practice of Asclepiades was congenial to the character of the people amongst whom he resided, and he indeed appears to have modelled his conduct in every respect to their own taste. For those physicians who were not very anxious to acquire a knowledge of the primitive causes of life, health, and disease; who took nature for their guide; contenting themselves with attentively observing the progress of disease, without attempting to interfere with its course when it ran through its different stages with precision, only endeavouring to restore it to its natural regularity when it deviated from that order, Asclepiades had the most profound contempt, and he facetiously termed their conduct,—*a meditation upon death.*

The reign of the opinions and method of practice of Asclepiades was not of long duration, although his mechanical notions respecting physiology had drawn over to his party the sectaries of Epicurus and Leucippus, at that time the directors of public opinion in physics in Greece and Rome. A sect sprang up, the founder of which was Themison, whose doctrines gave more scope to the play of an active imagination, and were more in harmony with the rising taste of the people. It seems ever to have been the fate of medicine to have the basis of its doctrines deduced from the favourite branch of physical science of the concurrent period. Music seems to have furnished Themison with the first ideas of his system: *constricted fibres, relaxed fibres*, and (what it is difficult to form any precise idea of) a *combination of those two states*, constituted the nature of the various species of disease. This doctrine has also been since renewed at various times under various forms, with all the pomp of a new theory; and is indeed applied at the present day to the doctrine of fever, by a physician of considerable reputation. This sect termed themselves the methodists. Their practice was in general simple: consisting in the use of *blood-letting*, and some other analogous means, to relax the inordinate tone of constricted fibres; and of stimulants, to increase that of relaxed fibres; but in diseases of the third class, and in those of long duration, they were confused and indecisive in their conduct, and they endeavoured to hide their embarrassment by cabalistic arts. Bleeding was here but rarely employed: their grand measure was what they termed the *metasyncritick* or *resumptive circle*. The introduction of the use of *leeches* seems to have been due to Themison; they were first spoken of as being employed for blood-letting in his works; and, as he was not much inclined to the abstraction of blood, he probably thought by this measure to alleviate local constriction, without any considerable loss of that fluid.

The doctrines of this sect were prevalent until the time of

Celsus. Blood-letting was then again resorted to with more freedom, though with much caution in its use; and, perhaps, still with too much reserve in its application, since old age, pregnancy, and infancy, were designated as contra-indications to its employment. There were however but few diseases in which Celsus did not employ it, occasionally, in their first stages; though in acute maladies it was not resorted to, in general, after the third or fourth days, and was but rarely carried to such an extent as to induce syncope,—a consequence which he seemed to regard rather with an undue degree of fear; though, perhaps, he might have been led to this by the rash conduct of some of the remaining dogmatists.

In continued and epidemic fevers, he placed his chief reliance in this remedy, referring the use of purgatives and abstinence, the common measures of his immediate predecessors in all fevers, to agues. Severe pain, hæmorrhage, convulsions, and palsy, always claimed the application of this measure, in his opinion. He never used it in the paroxysms of fever, and always stopped the flow of blood when it assumed the florid hue.

Coelius Aurelianus succeeded him: he principally adopted the doctrines of Themison and his sectaries, which he has developed in a comprehensive manner, though his style is obscure and inelegant. He employed blood-letting as a common measure according to his theoretical principles, and consequently in too partial and restricted a manner; though he generally employed it in the early stage of fevers.

Aretæus, who was contemporary with, or perhaps somewhat antecedent to, Galen, and whom we first notice, that this part of our history may terminate with the view of the doctrines which reigned universally throughout Europe for so many ages, employed blood-letting much more freely, especially in ardent fever; though he also adopted the notions of *strictum* and *laxum*. He recommended that it should be taken from a large orifice. He conformed to the notions of Hippocrates respecting the importance of the choice of vessels, which appear not to have been much regarded by his immediate predecessors. Thus, he abstracted blood from the region of the pubes in affections of the uterus, from the forehead in those of the brain, and from the tongue in cynanche. He also appears to have used arteriotomy more frequently than ordinary; and very commonly employed cupping with scarification.

We now arrive at Galen. He was a native of Pergamus, studied at Alexandria; and, at the age of 32, went, in the 193d year of the common æra, to Rome. Let us here adduce the character given of this celebrated man by one of the finest geniuses that appeared to enlighten human nature in the latter part of the last age: this will form an appropriate proëmium to

the account of the revolution that took place in the use of the remedy forming the express subject of this history, from the system of doctrine he instituted.

"After the lapse of many ages lost to its progress, after many disputes and errors, medicine had need to seek a new and more certain road. It was time for it to return from the following of dogmas, to the contemplation of nature, or of Hippocrates, her faithful interpreter. Galen appeared. His genius was sufficiently vast to embrace all the sciences, and to cultivate them all with equal success. From his infancy he gave proofs of his rare capacity, and even in the schools he began to discern the vacuity of the reigning systems. But little satisfied with what his masters taught him as incontestible truths, as the eternal principles of the art, he perused Hippocrates: he was enlightened, as it were, with a new beam. On comparing his descriptions with nature, his astonishment and admiration were increased. Hippocrates and nature were from that time the only masters from whom he would receive instructions. He began to comment on the writings of the father of medicine: he presented his views under different aspects, which had not been previously discerned; he repeated his observations, enriched them, and supported them with all that science and philosophy could lend, either by analogous facts, a comparison of different theories, or the combination of different modes of reasoning. In a word, Galen resuscitated hippocratic medicine, and gave to it a splendour it did not possess in its primitive and simple state. But, it must be acknowledged, what it acquired in his hands, was perhaps rather showy adornments than true riches. The observations collected, and the rules traced, by Hippocrates, on assuming a more brilliant and systematic character, lost much of their purity: under the extraneous envelopments derived from the sciences, or from different dogmas, nature, whom the physician of Cos had always embraced with so much propriety and reserve, was almost stifled and lost; and the art, surcharged with rules, either superfluous or too subtile, only became embarrassed with many difficulties not really attendant on nature." This is the description of Cabanis.

The knowledge of anatomy which Galen had acquired at Alexandria, application to which he never ceased to pursue in the dissection of brute animals and in the works of Aristotle, contributed to render his knowledge of the functions of the animal economy more precise than that of his predecessors. He also caught a glimpse of the opinions of Aristotle respecting the two series of functions of animal bodies; notions that afterwards remained neglected until they were discerned by Buffon, and finally fully developed by Bichat, under the designation of the systems of organic and animal life. All this gave a boldness

and decision to his measures; and his theoretical opinions leading him to the common use of blood-letting, this remedy was consequently, under his direction, carried to a great extent. He is the first who commonly speaks of the quantity he abstracted; and this was on many occasions very great; often carrying it so far as to induce syncope, which he nevertheless considered a hazardous measure. There were few diseases in which he did not sometimes employ it, in persons above the age of puberty, and when the strength would permit. He was in this respect much regulated by the state of the pulse, though his conceptions on this subject appear to modern physicians to have been merely flights of imagination not applicable to nature. He was careful in the choice of certain veins for certain diseases, generally following the precepts of Hippocrates; and there were few that were not subjected to his lancet and cautery. His epistle to the sectaries of Asclepiades, on the use of blood-letting in fever, and his observations on this subject in his book on Method, contain the substance of his doctrines on this point, and comprise many judicious and highly valuable remarks, and some interesting cases. We there find that he employed blood-letting, even to fainting, in a case of low typhous fever, and with the most fortunate results. This part of his works would be alone sufficient to induce us to join in the eulogia that have been conferred on that great man; though it must not be concealed, much of his glory in the early ages of the modern nations of Europe, arose from some fortunate and adventitious circumstances. His genius was of the species best calculated to ensure his fame: it was active, bold, and penetrative; with a fire that, when employed in censure, made his adversaries shrink from before him. He adopted the philosophy of Aristotle, with some of the metaphysical principles of Plato; and from this he became patronized by the primitive fathers of the Christian church, who also followed it; and, finally, his method, manner, and acquirements, all concurred with those adapted to the taste of the gothic schools.

The use of blood-letting is again becoming carried to a great extent, in diseases to which it was a few years since considered inapplicable. Let the most ardent votaries of this remedy, then, direct their attention to Galen; they will in him find one who will go hand in hand with them to their utmost extremities, and be no more deterred than themselves from having recourse to it, in spite of debility and all its attendant signs, when this arises from local inflammation or partial concentration of the vital powers.

[*To be continued.*]

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Considerations on the State of Medicine in France, from the Time of the Revolution to the present Period. By J. B. REGNAULT, M.D. Consulting Physician to the King, &c. &c.*

ENTHUSIASM may lead to grand and brilliant results in the fine arts; but, in the sciences, its influence is almost always injurious. Yet some writers censure all the productions of the present period, discerning nothing good or beautiful but in those of former times; others, not less exclusive, consider the present only as an enlightened age, seeing in the past nothing but the shades of ignorance and barbarism. The wise man will endeavour to avoid equally those rocks, and to find truth between the two extremes.

The human mind seems to be constantly annoyed by the want of food for its insatiable curiosity. From this irresistible propension towards novelty, as much as from the progressive course of observation, have arisen all the medical theories which have by turn prevailed, from Hippocrates to the existing period.

The instability of those theories, and the obvious obscurities presented by the picture of the healing art to the greater number of physicians, seem at first view to authorize a conclusion, that medicine is the least exact, and the most conjectural, of all the sciences. This notion, which is utterly false, has been favoured by the unjust as well as imprudent criticism that has been conferred on the ancient practice in medicine, and by the extravagant praise given to the labours of the modern schools.

What can persons in general think of a science, which, they say, after having existed two thousand ages, has entirely changed its face within the space of twenty years? In their eyes, medicine can be merely a vain display of rules without a solid basis, and of precepts devoid of utility:—uncertainty is its characteristic; its results, in society, must be either nugatory or deleterious; and the healing art can only be one of those happy frauds, which console the human species by throwing a veil over sad realities.

A popular prejudice has thus been strengthened by the very circumstances which should destroy it; and thus, when medicine daily witnesses the confirmation of those axioms on which it rests, the unfavourable opinion that has been conceived respecting it, has become more fortified from day to day.

It would be easy to show, that this pretended versatility is

* This memoir has been published by Dr. REGNAULT; but a copy of it, with the addition of notes, designating the authors alluded to by the writer, having been transmitted to us by a correspondent at Paris, we are disposed to insert it in this part of our Journal, considering that it will prove instructive, and otherwise useful, to many of our readers.—EDIT.

derived either from the annual and necessary progress of a science gradually enriched by observation and experience, or from a change more or less important in its language or purely theoretical considerations. If we can prove that there does not exist so much difference as may be supposed at a first view, between the method of the earlier practitioners and that of those of the present day, shall we not have contributed to show that medicine, far from being conjectural, is founded on observation;—that it has fixed precepts, certain methods, heroic means, and brilliant conquests, as glorious to the physician as they are useful to human nature;—and that the modifications which have been impressed on it by time, prove the solidity of its principles, instead of unveiling its instability?

Let us for an instant examine the state of medicine in France before the Revolution;—compare what it was then with what it is at the present time, principally directing our attention to the practice of the art;—and we shall see that, with the exception of some innovations, medicine has been always the same, and that its basis has not varied.

We shall not only point out the part which should be attributed to the physicians of the ancient faculties, in the impulse given to medical science at the epoch of the Revolution, but we shall also show with what ardour the professors and the pupils of the new schools have received and favoured that impulse; and we shall designate, in a rapid manner, the results of the labours undertaken in France, during the last thirty years, for the perfection of the healing art.

The subject is immense, and might easily make the matter of a volume: we shall confine ourselves to general considerations, which may perhaps furnish some useful documents to the faithful historian of medicine in the 18th and 19th ages. We could not enter into details in the limits of a memoir; still we may hope to say sufficient to effect the end we have proposed.

In the examination we are about to commence, our only ambition is equally to avoid adulation and satire. Those men who need not fear an investigation of their titles to glory, will applaud our frankness.

We shall not pronounce the name of any living author,—so that the care of making the honourable applications they may please to those who are the objects of them, may be left to the public, always equitable, rather than to the opinion of a single person. In acting thus, we hope to deprive approbation of its insipidity, and censure of its bitterness. Those who disapprove this conduct, will show more vanity than delicacy, more avidity for praise than correctness of sentiment; and we can easily place ourselves above their censure.

If we were disposed to extend our observations to the origin of the healing art, we should state how the experience of Hippocrates, bequeathed by this great man to posterity, became the patrimony of his descendants, and afterwards, that of judicious physicians of all ages and of every enlightened nation? We should see the sublime reveries of antiquity ornament, or rather overcharge, the sentences of the divine sage, and alter even the sense of them, but never cause them to be forgotten. We should see the Greeks, the Romans, the Arabians, the Italians, the French, the Germans, the English, and the Spaniards, gradually add some lines to the immortal tablets of the Prince of Physicians;—insensibly augment the treasure of experience; —and drive to the last extremities the sectaries who have wished to proscribe the memory of a great man, whose name alone is for them a refutation, and even a satire.

Many errors, many sterile hypotheses, have without doubt been mingled with the doctrine of Hippocrates; but this doctrine has remained unshaken amidst all the systematic tinsel with which it has been charged: it has been cherished by all those physicians who have especially devoted themselves to the improvement of the art. The most wise, however, have not disdained the fruits of recent observation; they have profited, to the great advantage of human nature, by the labours of their contemporaries, taking care to disengage them from the incoherent, or at least always useless, explanations with which they have been disfigured. Indeed, when the dogmas of Galenism, of medical chemistry, and of Boerhaavisme, absorbed the whole attention of vulgar physicians, a few judicious observers, docile to the voice of nature and of truth, listened only to the precepts of experience, and complacently smiled at the declamations of the fanatic admirers of the predominant systems.

It is not, then, at the present period only that the happy disposition to confine ourselves to facts as they are presented to us by nature, has been assumed: it is not at the present period only that men of cool understanding, equally disdaining solidism and humorism, mechanism and Brownism, have appeared. Physicians have existed in all ages, who, after having, by the aid of analysis, so natural to the human mind, deduced from the aspect of the patient all the circumstances dependant on idiosyncracy, have been content to study the symptoms, to investigate the seat, of the disease, and thence to determine by analogy the necessity of employing the particular means of which experience, the only judge in this important point, had demonstrated the efficacy.

The progress of anatomy, without producing any change in these principles, has given a more assured mode of conduct to those men of superior talents who follow this excellent method.

If anatomical knowledge were formerly less generally diffused than at the present time, it was not because its utility was not understood, but because an unusual degree of courage was necessary to lead a person to shut himself up in a frightful cell, infected with the remains of dead bodies kept for a period of two months;—it was because it was necessary for a person to expose himself to the almost inevitable dangers of a disease often mortal, in receiving a sort of instruction, of which all men of genius were nevertheless ardently desirous. The writings of Lecat, however, at length inspired them with all the ardour necessary to surmount the numberless obstacles to which they had been exposed by a defective mode of education.

The memory of A. Petit deserves also to be recalled: no less able as a professor than as a practitioner, he could deprive anatomy of all its dullness, and give to his lectures a charm but little known.

Pathological anatomy was studied in the writings of Bonnet (Bonetus), Morgagni, Lieutand, and in the traces of Desbois of Rochefort;—physiology and comparative anatomy, in the immortal work of Haller, and in the course of the eloquent Vicq-d'Azyr,—of Vicq-d'Azyr, whose elocution was so refined, whose knowledge was so profound, and whose views were so extended;—of Vicq-d'Azyr, too much neglected at the present day, and who should nevertheless be justly considered as the founder of physiological instruction in the school of Paris. The friend of truth must read with pleasure the fine eulogium of this great man, traced by the pen of the eloquent author of the *Nosologie Naturelle.** Why has not every pupil rendered to his master the justice they owe to him? This reproach cannot fall on the learned editor† of the works of the Perpetual Secretary of the Royal Society of Medicine.

A physician,‡ equally claimed by the two branches of the art, and who long since commenced the most honourable career as a professor and as a practitioner, conceived and executed the first project of a plan of medical anatomy. This work is not the least of the titles to glory which he has merited by his excellent treatises on several points of the practice of medicine. Called to the first place near a monarch who is an enlightened appreciator of true merit, this venerable dean of the physicians of France worthily represents two ages of a science, to which he has attached his name in a brilliant manner.

At the epoch to which we allude, Sauvages served as a guide in the study of the nomenclature of diseases, and of their different species and varieties. The imperfections of his nosology were not dissimulated; but these faults, counterbalanced by

* M. Alibert. † M. Moreau de la Sarth. ‡ M. Portal.

great advantages, were not in any way dangerous. Cullen, however, reduced the table of diseases to more just proportions, and diminished the number of species, evidently too multiplied by the learned professor of Montpellier.

The work of Gaubius was, it is true, the only manual we had then on the knowledge of diseases; but, if it has become antiquated, it has not been replaced by any other worthy of being compared to it.

The meditation of the writings of Baillou, Sydenham, Baglivi, Hoffman, Boërhaave, and Van Swieten, the perusal of which is now too much neglected;—the Clinical Treatise of Desbois of Rochefort, the study of his Materia Medica and his excellent practical Lectures; completed the course of the young physician, really jealous of worthily qualifying himself for the exercise of the most honourable of professions.

Whilst Louis, Sabatier, Peyrhill, Desault, and Baudelocque, enlightened in their courses a rising generation ardently desirous of the acquisition of knowledge, the immortal Academy of Surgery dictated to European surgery the laws which are still respected; and left, in the collection of its memoirs, an heritage that will be for ever celebrated.

Macquer, Darcet, Lavoisier, Fourcroy, and Guyton-de-Morveau, prepared, by their labours and discoveries, the success of the chemists who have replaced them. We should also remark, that the successors of those great men have been just and grateful to their masters; and we feel pleasure in rendering this tribute to their honourable conduct. Why can we not say as much of all physicians!

Baume, notwithstanding his opposition to the new chemical nomenclature, will ever be an authority in pharmacy: his work is still the manual of all the pharmaceutists of Europe.

After having thus very concisely indicated the course of medical study followed before the Revolution, let us see what were the practical opinions then generally adopted.

Many persons believe, or rather feign to believe, that, thirty years since, to bleed and purge in a purely empirical manner, formed the whole code of a practical physician. It is thus that ignorance and dishonesty assiduously conspire against truth. Nothing is more easy than to reply to those who thus contemn the ancient practice of medicine.

The doctrine of fevers was, it must be acknowledged, founded solely on their symptoms: these maladies were considered as general affections of the system, especially by the practitioner who was an enemy to all hypothesis; but matters did not therefore take a worse course; for a too-exclusive theory had not yet taught physicians to see every where nothing but excess of

power or of debility. A hard and frequent, or concentrated, pulse; intense heat of the skin; dryness and redness of the tongue; determined the true practitioner to employ immediately one or two bleedings, according to the strength of the patient: he knew, from Sydenham, Stoll, Van Swieten, and, above all, from observation, that a too-heating mode of treatment hastens, in such cases, the development of the symptoms to which the appellation putrid was then given, though this denomination did not prove hurtful in any way to the determined conduct of the physician. Besides, Selle soon produced his Pyretologie, which was received in France with eagerness, and of which attempts have too soon been made to lessen the value.

They were not then so prodigal of purgatives as some persons now assert: to be convinced of it, it is only necessary to read what Desbois said respecting the cases in which they are indicated. Stoll, in his immortal works, who was in the hands of every pupil and every practitioner,—Stoll forcibly pointed out the ill consequences of the abuse of those means so beneficial in certain circumstances, and so deleterious in many others. Many physicians had, without doubt, a sort of predilection for evacuant remedies: but are there not any of this kind now existing? The human mind but rarely keeps a just medium: and it is only a few physicians who have neither exclusive love nor hate for the different agents the three kingdoms of nature give to their disposal.

Emetics were not so lavishly employed as they have since been: physicians knew how necessary it was to be reserved in the use of these violent measures; and they had not yet arrived at the practice of administering them indiscriminately at the commencement of all diseases. They knew that, in some cases where this heroic remedy appears to be contra-indicated, it will however act with great efficacy; but its exhibition in these uncommon cases was confined to the more experienced practitioner; whilst now, the most contemptible *curer* prescribes it without distinction in all diseases, with an assurance that would excite astonishment, if we did not in the end recognize ignorance proceeding blindly through every difficulty, under the authority of others.

Vesicatories were often employed, less as evacuants than as powerful means of derivation and irritation.

Alphonso Lerois had already taught all the advantage that might be deduced from the application of leeches, especially in convulsions affecting infants.

Acute inflammations, the history of which has been so brilliantly elucidated by the progress of pathological anatomy since Morgagni, were hardly less well understood than at the present time. Something, however, yet remained to be done for their

methodic classification; but their chronic state had already fixed the attention of some celebrated practitioners. The researches of Stoll respecting latent inflammations are well known,—researches that have served as a model to all the subsequent labours to perfect the diagnosis of slow and chronic inflammations.

It would occupy us too long to run over the whole nosological table, and show how, at the epoch to which we allude, all the diseases were considered, and especially in what manner they were treated; let it suffice to say, that the excellent practical rules of Baillou, Sydenham, Baglivi, Stoll, Riviere, Bordeu, Fouquet, Lorry, Quesnay, Bouvard, and Barthez, directed young physicians in the treatment of their patients,—but that experience was always consulted respecting the administration of the curative measures.

If we were to dwell on the picture of medicine in France before the Revolution, we should have to show that then, as at present, Paris was the centre of acquirements in medicine; that, at the formation of the new faculties, the professors brought forward traditions which they had collected in the ancient schools; and, conformable to justice, we should add, that they have themselves powerfully contributed to the ulterior progress of the healing art.

Descriptive anatomy, taught with so much care by Desault, has given rise to many treatises,* more complete than those of Winslow and Sabatier; yet these new works have not added much to those of these celebrated anatomists, who had the sense not to surcharge the memory of students with details from which surgeons could derive no utility.

Comparative anatomy has made great progress, and furnished some highly valuable illustrations to physiology. The honour of this is particularly due to the French. A treatise on this science, published by the first of our naturalists,† has obtained the approbation of the whole of the enlightened part of Europe, and has produced the most warm and happy emulation in the laborious anatomists of Germany. Many parts of natural history have been treated with great success by the coadjutors‡ of the illustrious philosopher we have just designated; and in this respect France still serves as a model to other nations.

The deep and comprehensive physiological views of Haller, Bordeu, Grimaud, Barthez, Vicq-d'Azyr, and Dumas, collected and appreciated by Bichât, with which he was inspired by an

* Those of MM. Bayle, Cloquet, and Marjolin.
† M. G. Cuvier.
‡ MM. Geoffroy de St. Hilaire, de la Marck, and F. G. Cuvier.

able master,* excited in him a generous ardour; and, soon becoming himself rich in a great number of facts, he joined them to all those which had been observed by the great men we have just designated; and from that time the name of general anatomy was given to a part of anatomy which had not previously formed a body of doctrine.

We should be ill understood, if it were thought that we wished to sully the justly-acquired glory with which a grateful posterity has gratified the memory of Bichât; but we cannot refrain from saying, that he did not act justly towards a great number of other authors, and particularly towards Haller; and, above all, Barthez, of whom he has hardly said a single word.

Amongst the numerous experiments made on animals, there are but few which have given rise to very advantageous results; and it is much to be desired, that the study of man, in the state of health and in that of disease, should not be neglected, to seek in the viscera of animals what will there never be found.

Nothing appears to us more remarkable, than the application made by Cabanis of modern philosophy to medicine. This immortal author should be reckoned amongst the number of those who have the most contributed to the advancement of medical philosophy: his work† is a fine monument, raised in honour of the sciences in the nineteenth century.

[*To be continued.*]

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Case of Myeleuthitis Hæmeuthyodes Encephalica, or Æsthesitis Encephalica. By T. PARKINSON, M.D.

HISTORY.—Aug. 21, 1819. I was called about noon to Mr. Wm. S. supposed to be deranged in his mind. He had returned the same morning from a journey to Bath and several other places, in the regular course of his business. At Bath he associated with some of his customers, and drank spirits with them in great excess for some days, contending vehemently with them on religious topics. On leaving Bath he became temperate in drinking,—indeed, abstemious. I have not been able to learn what business he transacted on his way to Redford, in Nottinghamshire, where he was seen by one of his acquaintances in an evident state of derangement of his mind. He had engaged his place on the outside of the coach to London, and had paid his fare from Leeds; but the guard of the coach strongly objected to taking him, on account of his mental derangement. His acquaintance, however, prevailed upon the

* M. Pinel.

† *Rapports du Physique et du Moral de l'Homme.*

guard to let him proceed; and he reached the Saracen's Head Inn, London, in the forenoon of the 21st of August. A gentleman, travelling by the same coach, observed his incapability of conducting himself properly, and kindly looked well after his manners; and, having obtained his address, he very properly sent for Mrs. S. and she with difficulty escorted him to his home. I was immediately sent for, and attended him as soon as possible.

Symptoms and Treatment.—Aug. 21, *noon.* Exceedingly agitated; apprehending he was an apostate, and that he was called for to immediate and eternal punishment, seeing demons, as he imagined, surrounding him, to seize him and carry him to judgment. Remonstrances were not availing. His pulse was slow and contracted, his skin hot, his tongue white, his face flushed, his eyebrows knitted, his voice loud and harsh, his language imperative. His persuasion that all he imagined was real, could not be weakened by any means that could be employed. Ungovernable in his actions; bent upon self-destruction; begged for others to destroy him.

Fiat venæsectio statim, et detrahantur unciæ viginti sanguinis, saltem e bractio.

℞. Hydrarg. subm. gr. vj. cons. rosæ canin. q. s. ft. bolus, statim post venesectionem sumendus, super lactando cochl. larg. iv. solutionis insequentis hora 3tia quaque donec alvus copiose soluta sit.

℞. Magn. sulph. ℥ ij. aquæ commun. ℥ vij. M ft. solutio.

Applicatur, aqua frigida capiti assidue.

3 P.M.—Somewhat more tranquil. Face less flushed; pupils contracted, eyes fierce; voice and mind nearly the same. Pulse more dilated and quicker. Medicine operated well.

Rep. VS. ad ℥xx.

℞. Antimon. tart. gr. ij. sacch. alb. ʒij. potassæ supertart. ʒſs. aquæ com. ℥vij ſs. M. Sumat cochl. larg. iij horâ 3tia quaque.

℞. Ung. hydrarg. fort. ʒj. intern. femorum, &c. assidue applic. horâ 4ta quaque. Total abstinence from any thing but water.

22d, 9 A.M.—Symptoms of the same quality, though less violent.

6 P.M.—Copious alvine evacuations. Very feeble, and much stiller. Three stools.

Straight waistcoat. VS. ad. ℥xvj.

Empl. lyttæ toti capiti. Persistat in usu ung. hydrargyr. et mistur. antimon.

23d.—Free alvine discharge; but less quiet. Ungovernable; face flushed; pulse quick and hard.

Persistat in usu medic. Applicantur sanguisugæ xij. temporibus.

6 P.M.—Much better. Leeches bled well; copious alvine discharges, dark-coloured and watery.

Rep. empl. lyttæ capiti. Persistat in usu ungt. hydrargyri.

9 P.M.—Pulse feeble; general symptoms less violent.

℞. Assafœtid., ammon. carbon., camph. aa. gr. iij. f. bolus.

℞. Infus. gentianæ, ℥vij ſs. sp. æther sulph. ʒ ij. M. capiat bolum, et cochl. larg. iij. Misturæ horis 4tis.

24th, 9 A.M.—Slept at intervals; in all, about two hours. No evacuations. Pulse too full, and quick. Evident remissions. The exacerbations at nine in the morning and at nine at night.

Applic. sanguisugæ xij. temporibus.

℞. Hydrarg. subm. gr. xij. extract. colocynth, ʒj. in pilul. xvj. div. sumat. iv. horâ 3tia quaque donec alvus soluta sit.

℞. Solut. magn. sulph. ℔ ſs. Sumat cochl. larg. iij. post singul. dosin pilularum.

6 P.M.—Leeches bled freely; medicine operated very copiously. Much calmer and cooler.

Persistat in usu solut. magn. sulphat.

25th, 9 A.M.—Very copious discharge by stool; pulse and countenance much better; intervals of refreshing sleep; evident intermission. The paroxysm coming on about 9 P.M.

A saline mixture, with antimonial wine.

Meet the next paroxysm, which is predicted at nine to-morrow morning.

26th, 9 A.M.—Has had some sleep at intervals; has been more tranquil. About nine, paroxysm and return of all the symptoms in excess. Pulse 130; ungovernable.

Detrahantur sanguinis unciæ xx. saltem e nucha colli statim cucurbitalis, et repetatur operatio vespere si paroxymus recurrit.

Applicantur sinapismi pedibus ambobus.

No evening paroxysm. Copious purging; mouth sore with unguent hydrarg.

Solut. magnes. sulph. addendo syrup. rhamn. ℥j. Omitta ungt. hydrarg.

10 P.M.—Slept longer at a time.

Persistat in usu solut. magn. sulph.

27th, 10 A.M.—Copious evacuations; slept nearly two hours. Began about nine to be worse. Pulse quickened, 130; face flushed, eyes reddened; mind much deranged. Sinapisms had acted well.

As the paroxysm would begin to decline about noon, capiat pulverem sequentem horâ 1ma. P.M.

℞. Pulv. ipecacuanhæ comp. ℈j. ft. pulvis.*

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* Contains two grains of opium. This note is for our foreign readers.—EDIT.

9 P.M.—Had become more calm about one; took the powder, and slept more than three hours.

Repitatur pulv. ipecac. comp. ℈j. horâ primâ mane.

28*th*, 10 A.M.—Has had three stools: all the stools have been dark-coloured and watery hitherto, but now bilious. The first dose of opiate calmed, the last laid prostrate. Sweats profusely.

4 P.M.—Stiller, more rational; pulse feeble; mouth very sore.

No medicine. Wine and water, or a little porter; beef-tea, gruel, tea, or milk-porridge.

29*th*, 10 A.M.—Much more tranquil and rational. Pulse soft and much slower; slept soundly more than two hours at a time; no stool.

Capiat dosin solutionis magn. sulph. et bibat ad libitum infusi rosæ. Change of linen, washing, &c.

3 P.M.—Bore shifting well. In all respects better; takes wine and water, milk, broth, &c.

Persistat in usu solutionis magn. sulph. et infusi rosæ.

30*th*.—Better; voice changed from harsh to soft-toned; from imperative to precative. Persistat in usu medicamentorum.

31*st to Sept. 3d*.—Rapid amendment.

4*th*.—Convalescent. Ordered into the country.

I consider the case here related to have been inflammation of the substance of the brain; and that the means employed, and to the full extent mentioned, were not only efficacious in preserving the life and the intellect of the patient, but were probably such only as would have been availing.

I have publicly given it as my opinion, and have taught it to my pupils, that the brain within the head is an organ of sense, composed of the same materials and association as all the perceiving organs, such as the retina, &c.; viz. *myeleuthitona hæmeuthytodes*,—an association of muscle with brain: otherwise I cannot conceive how it could obtain the function called perception, consisting of the two essential attributes of animal life, sensation and motion. (Vide my *Synopsis Zoo-Nosologiæ*.) But the great office of the brain within the head is to elaborate perceptions, obtained by the organs of sense, into judgment or mind; and to direct the commands of the mind, *volitions*, through the nerves, *myeleuthytona enyphantodes*, to the moving solids, *hæmeuthytona*, vulgarly called muscle, from some supposed resemblance to a mouse.

The function of the brain, then, being *æsthesis*, when it is in hyperfunction, as it must be under inflammation, the elaboration of perceptions into mind must be incorrect, and the volitions indiscreet: these are the very symptoms which characterize inflammation of the brain, and are the inevitable consequences of it. As for fever, it is symptomatic, and symptomatic only,

of local inflammation; it therefore does not admit of any distinct appellation. Inflammation of the first order of solids, in its progress, always must be accompanied with a corresponding degree of hyperbiosis throughout the whole of that genus of solid which is the seat of the original attack; for example, the case before us, *myeleuthitis encephalica hæmeuthytodes*,—that is, an inflamed state of the brain within the head,—had its concomitants; namely, hyperfunction of all the organs of sense: the patient's eyes, ears, and all the other perceiving organs, even the rete mucosum, the general perceiving organ, all were in excessive exercise of their natural function, marked and known by the perceptions being incorrect and excessive. Had the seat of the original attack been in a membranous solid, as it is called, it would have been known by a very different assemblage of symptoms; for, the function of membrane being *parenthesis*, the congress of symptoms would constitute *parenthitis*, or inordinate and painful interposition between one solid and another. The extension of inflammation would have been especially in membranes, and have been shown by the general constitutional sympathies. Fever, if the term must be mentioned again, is not the *idiopathic* affection, but is *symptomatic*, and is a necessary and inevitable effect of a certain degree of intensity and extension of definable local inflammation. Examine inflammation of the muscle, *rheumatismus, hæmeuthitis*; the identity of the disease is known by different symptoms to either of the before-mentioned affections, though the precise nature of the affection is the same in them all; namely, exercise of their natural functions above the limits of health, in the *rheumatismus kinesitis*, or inordinate and painful muscular action. I shall conclude by observing, that inflammation of any genus will always have certain peculiar marks, by which, with an ordinary share of discernment and attention, it may be distinguished from inflammation of any other genus of solid.

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Observations relative to the History of the Operation of Lithotomy.

By JOHN LAWRENCE, Esq.

LOOKING over a late publication of Mr. Carpue, on the high operation in Lithotomy, I find he dates the commencement of that practice in England from the year 1719, several years previously to the experiments of Cheselden. Now, to the best of my recollection, there is an author who in this case challenges priority over every other Englishman;—an author, in whom it is no small difficulty to decide whether vulgarity, conceit, or real sterling talent, predominate. I allude

to Henry Bracken, M.D. *our* celebrated, experienced, and really profound, writer on the *res veterinaria*, who, I think, in his *Lithiasis Anglicana*, a tract to be found in some old medical collection, which I have not seen these thirty years, makes the above pretension. He says, he was the first man in England who practised the high operation; that he did so with success, and in consequence recommends it. Now, I apprehend there is a probable ground for his pretension, as he attended the Hôtel-Dieu at Paris, and was consequently acquainted with the discovery of *Frere Jaques;* and, as this might well be about the year 1712 or 1713, the doctor might have made his essay in England immediately afterwards.

Having no pretensions to a knowledge of the distinctive merits of the subject, the above observations are tendered as mere matter of historical record.

Bridgewater-street, Sommers Town; Sept. 16, 1819.

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Observations and Reflections on the Disease produced by the Action of the Canine Virus on the Human Body. By JAMES MEASE, M.D. Philadelphia.*

THE disease produced by the action of the virus of a rabid animal of the genera canis and felis, may be justly styled the *opprobrium medicorum;* for, notwithstanding the length of time that it has been known, the numerous works written upon it, and the various modes of treatment pursued, we every year see or hear of instances of death from it. So long, therefore, as it continues to baffle the skill of physicians, it is worthy of investigation; and the advice which I gave many years since on the subject, may with propriety be repeated: that is, to publish the history of every case and treatment, whether successful or the contrary, in order that we may adopt the remedies by which it was cured, or avoid those that failed. In the United States the disease frequently appears; but has as yet never been cured. During the past winter, one case happened in Philadelphia; two years since, one occurred in Frankford, near Philadelphia; two or three in New England; last year, four in Richmond, Virginia. One case also occurred in Montreal; and all unhappily with the same result.

The cases in Richmond and Montreal were particularly interesting to me, because, in one of the former, the preventive treat-

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* We refer our readers to the eighth volume of our Journal for an account of the chief of the original opinions of this zealous and intelligent physician on this subject. The present memoir will furnish our readers with an account of the history of hydrophobia, and its treatment, in the United States, up to the existing period.—EDIT.

ment was adopted which I many years since showed had so often failed that it was not to be trusted; and the curative remedy that I have long since reprobated, was followed, in the latter, with the same result which attended its use in almost every instance on record in which it had been tried. The reader will at once refer my exception to those cases cured in Calcutta by bleeding. Those in Richmond were doubly important, on account of the total failure of that disgraceful imposition, the Chinese snake-stone, which I have noticed in Coxe's *Medical Museum*, vol. v.

Abstracts of three cases that occurred in Richmond, Virginia, from *Rice's Magazine*, Richmond.

1. Edward Taylor, aged 12 years, was bitten on the 27th March, 1818, in the back of the hand, and in the palm next the thumb, by a dog of the family, which had shown no symptom of madness, except an unusual degree of ill-nature. The dog was soon tied, eat freely, and recognized the members of the family, giving the usual indications of affection when kindly called. The wound was well washed in brine; the snake-stone was afterwards applied four or five times to the wounds, and was said to have performed its office perfectly well. The wound was also kept open for several weeks, and then healed.

On the forty-second day after the bite the boy began to complain. He was purged with calomel and Glauber's salts. In attempting to swallow the solution of the latter, much difficulty was discerned, and he sighed continually. In drinking, the difficulty was not in swallowing, but in getting the water into the mouth: the lips then closed upon it. That once accomplished, the swallowing was perfectly easy. He made powerful efforts to resist the spasmodic motions produced by every attempt to receive liquids; complained of the "beating of his heart;" heat considerable; pulse extremely rapid, but feeble. One hundred drops of laudanum, given in the course of a few hours, increased the restlessness, and aggravated the symptoms. He was perfectly sensible, and his naturally affectionate disposition was increased towards his mother and relations. His eyes became so brilliant as to require an effort to look him in the face. The symptoms became worse rapidly, and in twenty hours from the first appearance of hydrophobia, his agony was over.

2. The second case is related by Dr. Henning, in the *Richmond Inquirer*, July 5.

James S. West, aged two years, was bitten on the 22d May, 1818, through the palm of the hand. The snake-stone was applied, and stuck for some time: it was applied a second time. Lunar caustic was afterwards applied, and also warm poultices; mercurial frictions were used, and calomel given. The next

day the eschar produced by the caustic was removed, the wound dilated, and the caustic again freely applied: the wound was dressed with blistering ointment, and a poultice applied over it. By this treatment, the wound discharged freely for several weeks. A slight mercurial action was also produced; when the mercury was laid aside, the wound filled up, and soon after healed.

The disease appeared on the 22d June in the night. The symptoms were, starting in sleep, screaming, and pain in the head; agitation at the sight of, and buzzing of, flies; or by exposure to a current of air, or the reflection of his own image from a looking-glass, (as usual.) An injection of fifteen drops of tincture of opium was prescribed, and directed to be repeated until some effect was produced. Cold applications were directed for the head. The wound was again cauterized, and five drops of laudanum given every half-hour. Seventy-five drops had been taken by early the next morning without any good effect, not even sleep. Perspiration flowed freely, and a frothy saliva issued from the mouth. The jugular vein was then opened; but, before four ounces were drawn, faintness ensued, and the blood was stopped. Between two and three o'clock P.M. the child died.

3. Abstract of a third case of the disease that occurred in Richmond, Virginia, in 1818; related by Dr. TRENT. (*Richmond Inquirer*, Nov. 24.)

The dog discovered no other symptom of the disease than drooping and the refusal of food. The same dog, October 23d, bit a negro man in the naked fore-arm: the dog was confined, and yet fondled on another negro man, Burwell, who approached him, submitted to be chained, and wished to follow him out. While caressing the man, the dog took the man's hand gently into his mouth, but without the slightest disposition to bite: in retracting his hand suddenly, he scratched his fore-finger against a tooth. The dog died in forty-eight hours after the first appearance of indisposition, without discovering any other symptoms of madness. Slight indisposition took place on the 13th November; but on Monday evening, the 16th November, he was seized with a chill, high fever, and great thirst. The next day he complained of shortness of breath, pain in his left shoulder, slight head-ach, and lassitude; had no aversion to fluids; no pain in the wounded finger, which had healed soon after the injury; pulse preternaturally slow, soft and feeble; skin cool; tongue furred. Took an emetic, which he drank with ease, and worked it off with plentiful draughts of warm water: it opened his bowels twice. In the evening, feeling hungry, he attempted to drink some soup, but was seized with a spasm that threatened suffocation. The next day his skin was

cool, pulse irregularly frequent and slow; felt shortness of breath, and soreness from his throat to the pit of the stomach; surveyed his face in a glass with composure; drinking soon excited a violent spasm. Two abortive attempts were made to bleed: took fifteen grains of calomel, and thirty of jalap, in pills, with ease; blister applied along the whole course of the spine, another from his throat to the pit of the stomach. More abortive attempts to bleed in the arm, in the two jugulars, the veins on the feet and ankles, and two temporal arteries: six ounces only were obtained; blood thick and black, and never separated. Skin too cool; blisters were applied to his fore-arms and legs, and bottles, filled with hot water, to different parts of his body. In the evening lunar caustic was applied to the surface exposed by detaching two and a half inches of blistered cuticle on the spine of the neck, the pain from which excited several fits of convulsive agitation; swallowed with ease ten grains of calomel and three of ipecacuanha in two pills; took a second dose, which produced free perspiration, nausea, and vomiting. The blisters produced stranguary. He asked several times for drink, but took it only twice, as it excited convulsive agitations. The windpipe was found morbidly dry; the stomach exhibited strong marks of inflammation; diaphragm very red. Dr. Trent remarks, that, except the "inability to make a long breath, there was not a symptom which justified blood-letting;" but supposes, that if he "had been seen on Monday night, blood-letting to fainting might possibly have saved him. Before the case was recognized as hydrophobia, the action of the heart and arteries was prostrated by the impress of the disease on the function of respiration, upon which their action depends." He was sensible to the last, and showed not the least disposition to do injury to any one.

The foregoing cases admit of several deductions, which it may be useful to state; and I notice them with the more satisfaction, not so much because they confirm some of the opinions and positions I first advanced in my Inaugural Dissertation in 1792, and since, in other papers, on the disease, but because they will illustrate the pathology of the disease, dispel error, and, I hope, thus lead to the cure of this hitherto almost unmanageable disease.

1. They show that the stage of the dog's madness has no influence in expediting, or protracting, the operation of the rabid virus on the human body. The dogs that bit the subjects of all the cases in Richmond, were evidently in the very earliest stages of the disease, as appeared by the inoffensive and friendly conduct of two of them; and, in the case related by Dr. Henning, it is stated, that the dog bit the hand of the child, which he put out through the palings of the yard as the dog passed in the street. Having bitten other dogs and animals, "he was pur-

sued with an intention to kill him; but, taking refuge in the house to which he belonged, he was confined, and, before he was killed, evinced unequivocal symptoms of hydrophobia." Now, dogs in the advanced stages of their disease, always run away from home, if not confined. It was formerly supposed, that, the longer the disease had continued in a rabid animal, the more virulent was the poison contained in the saliva.

2. They prove satisfactorily, that the size of the wound has no influence upon the quick or tardy operation of the virus. It was formerly supposed, that, the more virus was infused in the system by the laceration of the dog's teeth, the more sudden would be the attack. The analogies of the small-pox virus, and of that of syphilis, might have prevented the formation of such an opinion, and of its adoption; but they were overlooked. Numerous facts now show its erroneous nature. In my remarks on the case of the boy Yorke, related by Dr. Physick, which I closely attended to, I have adduced several cases to prove the accuracy of the above deductions. (See *New-York Medical Repository*, vol. v. p. 292.) Yorke himself was one.

3. The third case related, shows also how fallacious all preventive remedies must be. The dog bit a negro man in the naked fore-arm, and as yet has remained well; whereas, a slight scratch on the fore-finger by the dog's tooth, infused the virus that took effect in Burwell. Had the man first bitten applied the Gloucester (Virginia) infallible, the Chinese snake-stone *(risum teneatis medici)*, or taken internally any other reputed specific, a new proof would have been adduced of their salutary power in securing the system against an attack of the disease.

4. The foregoing cases, and many more, recorded by myself and others, prove the total inefficacy of the common preventive treatment by the application of caustics to the bitten part. Indeed, after the mass of evidence extant on this head, it is surprising that physicians should torture their patients with them, or place any reliance upon their capability of preventing the operation of the poison. At an early date of my attention to the disease, I was satisfied of their utter inutility, and decidedly expressed myself to that effect, in my inaugural dissertation. The subsequent publication of numerous cases, in which they have been used, under every circumstance favourable to their efficacy, viz. of speedy and severe application after the bite, have served to strengthen my belief in their inefficacy, and urge me to caution practitioners against placing the smallest reliance upon them. Dr. Henning gave them the fairest trial possible, by dilating the wound, and by their severe application, but without success, although the "free suppuration" caused by them was kept up "for several weeks." Mr. Gilman, of

London, in his Prize Essay on this disease, has given a satifactory explanation of the cause of their failure. "When a caustic is applied," he says, "a new compound is formed,—a saponaceous mass or eschar, which is generally suffered to remain until it sloughs away. Of what, then, is this new compound formed, but of dead animal matter, a caustic, and of a peculiar poison, which we believe to be the cause of hydrophobia? It is true, the neighbouring absorbents are destroyed, so far as the action of the caustic extends; but the canine virus is as likely to extend with it, being only in a state of union from the commencement of this operation, which is continued till the poison is uniformly dispersed through the whole of the adjacent parts, forming an animal soap by their commixture. Hence, by such means, a more extended surface is exposed to the action of the absorbents, which are rendered highly irritable and more active; and in consequence, perhaps, the case becomes more desperate." This is true philosophy. Mr. G. has collected, in one view, a number of recent cases, in which caustics of every description were applied to bitten parts, and in the most severe manner, without preventing the disease. These cases, with Dr. Henning's, ought to satisfy every one that it is torturing, without benefit, to apply them. But many more, that might be added, are quite a balance for those in which Dr. Mosely says he has used them with success.*

FOR THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Description of an Apparatus for Cupping, Dry Cupping, and Drawing Milk from the Breasts of Females; with some Observations respecting its Use. By Mr. THOMAS MACHELL, Member of the Royal College of Surgeons in London.

[WITH AN ENGRAVING.]

I TRANSMIT the following description of my patent apparatus for Cupping, &c. and observations on the mode of using it, for insertion in the Medical Journal.

The body of the apparatus, A, is of an oval form, having two orifices on the top, *b* and *c*. Into *b* is screwed an exhausting syringe or pump, and into *c* a screw-plug, for the purpose of opening and closing that orifice.

At one end of the body of the apparatus is fitted a stop-cock, E, to which is attached the flexible pipe, F; at the extremity of which, the different apparatus for cupping or drawing milk, as hereafter described, is to be affixed.

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* Press of other matter obliges us to defer the remainder of this article to the next Number.—EDIT.

In order to perform the operation of dry-cupping, the glass, H, is to be screwed to the end of the flexible pipe, F; and an exhaustion must be made in the body of the instrument, by making about thirty strokes of the pump, and by applying the mouth of the glass, H, to that part of the body of the patient to be operated upon; and, by turning the stop-cock more or less, the skin will be raised as much as is required; and the glass may be instantaneously removed, by unscrewing the plug, C, and letting-in the air.

For the purpose of cupping, scarifying, and abstracting blood, at one operation, connected with the extremity of the flexible tube passing from the exhausting-box, is a glass or metal bell, resembling in great measure the common syringe cupping-glass, into which is adjusted a simple piece of mechanism, whereby a plate, on which is fixed the lancet-points, after puncturing the elevated integuments, is disengaged from a catch, by pressure of the soft parts rising into the partially-exhausted vessel, on the button of a delicate spring, by the previous adjustment of which, the extent of the punctures or incisions may be very accurately regulated.

The lancet-bell, after exhausting, by about forty strokes of the piston, the body of the apparatus, is applied to the part from which it is intended to draw blood; and, by turning the stop-cock in the connecting tube, communication is made betwixt the two vessels; the integuments rise into the bell, press against, and are wounded by, the lancets or prickers, disengaged at an accurately-determined moment, and the blood is drawn from the orifices into the exhausted receiver. A cock in the exhausting-box, by admitting at any time the excluded atmosphere, removes the pressure, and liberates the apparatus.

The transparent crystal, which is let into the side of the exhausting-box, admits of a clear view of the blood, or other fluid, flowing into the instrument. By the side of the crystal, and upon the exhausting-box, is a scale; the division of which begins at half-an-ounce, and, in the ordinary-sized apparatus, is continued to the degree of a pint and half: the precise quantity of blood can thereby be measured with much accuracy.

The important advantages gained in the use of this apparatus,—of facility, precision, simplicity, neatness,—are incalculably surpassed by the power of its application to any part whatever of the surface, under any circumstances indicating its propriety, and by any person untrained to the manual dexterity of a professed cupper; and even without inspection of the part to which it is applied,—a circumstance frequently of much importance in female patients. The bone, or its periosteum, covered only by extenuated integument, can never be injured:

the skin and its vessels simply are divided, and that to any nicely-determined object, and into any desired point. There is no alarming preparation, no harassing change of apparatus, no exposure. Cleanliness, decency, and the quiet and mental tranquillity of the patient, are in no way infringed upon.

The delicate covering of the hydrocephalic infant's cranium may be depleted, without danger, without alarm, without trouble or delay.

In drawing the breasts, about four strokes of the pump will in general be found sufficient; and the nipple-glass, I, being screwed upon the end of the flexible pipe, the mouth of the glass must be applied to the breast; when the suction may be regulated according to the feelings of the party using the apparatus, by merely turning the handle of the stop-cock more or less; and, in order to remove the glass from the breast without difficulty, it is only necessary to unscrew the plug, when it will become detached.

The annoying, and often in their consequences seriously injurious, difficulties of abstracting milk from the imperfectly-developed nipple of young mothers, are too familiar to the practitioner in the department of midwifery, to need, in this place, more than simple mention. The inadequate and clumsy contrivance hitherto employed, gives place to the convenience, the precision, and the sufficiency, of this almost self-acting apparatus.

The delicate or exhausted female has but to apply the nipple-glass, without being disturbed even from a recumbent position, and regulate, simply by turning the stop-cock, the draught on her breast to the extent which her own feelings dictate as sufficient. The breast which, from ulcerated or excoriated nipple, cannot be emptied of its fluid by suction of the infant, but with almost insufferable agony to the mother, can, by this contrivance, be drawn without pain, and without the perpetual renewed irritation to the ulcerated part, which is the exclusive impediment to the process of healing.

By the adoption of a glass receiver to the neck of the nipple-cap, and which is detached or affixed by a screw-neck, the milk is received uncontaminated, and appropriable to the nutrition of the infant.

Great Ryder-street, St. James's;
Oct. 8, 1819.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

Relating to the History or the Art of Medicine, and the Auxiliary Sciences.

Floriferis ut apes in saltibus omnia libant,
Omnia nos itidem depascimur aurea dicta.

On the Departments and Periodical Actions of the Glands.

[BORDEU, *Rechérches sur les Glandes*, § cxix.]

WE shall term the *department** of a gland all that part of the system which enters into a sort of action when the gland acts: when these organs dispose themselves for the exercise of their functions, it is certain that they agitate more or less the neighbouring parts.

There are some glands which, when in action, suspend other functions, so that we may say, that, in certain respects, the suppression of those functions is comprised in the *department* of the gland which suspends them.

We even find some glandular bodies which augment, when they take on a certain kind of action, the motion of the heart, and which give shocks, more or less regular, to the whole nervous system.

We shall endeavour to elucidate these truths, which have been only perceived in a general manner. It will be necessary to determine the department of each gland, to know which are those that may act at the same time with it, and which are *congeneras;* and to ascertain how long they are engaged in action. Let us see, if what we are about to adduce will not throw some light on this matter.

The glands act to effect their excretion; there are periods when they are not in action; their action is, as it were, periodical:—these truths have been demonstrated in a former part of this dissertation.

Are not these periods marked and fixed? and what are the variations that may take place in them? This problem, and many others that might be proposed on this matter, are not easy of solution: we have not yet acquired the necessary materials. Let us see, however, if it is not possible to say something more determinate on the departments of the glands, and on their periodical actions.

An examination of what passes in the Liver.—Let us first speak of the gall-bladder; and, without stopping to consider its true position in all subjects, let us only examine what authors have said on the manner in which it evacuates its contents.

We find some who state that it is compressed by the stomach: the

* We now call it the *sympathetic relations* of an organ; but the word sympathy was not used in medical language at the time of Bordeu.—EDIT.

most modern authors render it subject to the action of the duodenum: but we do not fear to assert, that, if there were only these pretended causes for its evacuation, that this would never take place.

1°. The stomach does not touch it in hardly any subject; 2°, the duodenum touches it only in a few; 3°, every person may prove that compressing it in the dead body, and even with force, does not empty it: it must be very full for compression to produce a flow of bile from it; 4°, the colon constantly touches the gall-bladder,—but will it be said that it is to compress it? It must only empty itself, then, when the colon is full: which is an absurd supposition. Let us conclude from these proofs, without entering into long discussions, that the gall-bladder must be emptied by some other power than that of the compression of the surrounding parts.* We must not think that compression has nothing to do with it; but it is necessary that the gall-bladder should itself enter into action, and make an effort which renders it as if it were full. It is like the urinary bladder, like the rectum, the stomach, and the intestines: these reservoirs empty themselves by their own powers, and by the effort of the parts in their vicinity.

The gall-bladder is, without doubt, irritated by the matters which are in the duodenum, and which cause an appropriate irritation of the biliary duct, and the nerves of these parts; perhaps, indeed, the gall-bladder enters into action without being thus irritated.

The liver should certainly be regarded as one of the glands which we have termed active, and which have a particular motion for secretion and for excretion.

This glandular viscus is constantly agitated and irritated by the diaphragm; it is perpetually rising and falling; so it is probable it is always in some degree engaged in secretion: but is this secretion as continual as that of the saliva?

There is some period in which the secretion is much augmented; and this is apparently, under ordinary circumstances, when digestion is going on in the duodenum.

Habit, apparently, prevents our feeling the motions of the liver; inspection of living animals does not teach us any thing positive; we have, however, convincing proofs of such a mode of action of the liver: disease, and various preternatural states, furnish them.

Indeed, there are some persons, who, an hour or two after eating, become extremely yellow: they remark that this constantly happens during the period which they call the time of digestion, or when the aliment which has sojourned in the stomach passes into the duodenum.

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* We should have observed on first adducing these extracts, for the convenience of our less well-informed readers, that the arguments in them are expressly directed against the doctrine of Böerhaave, whose sectaries at that time were the medical heroes of Europe; and, indeed, not less celebrated in almost every part of the civilized world. The emperor of China, on writing to their master, addressed his letter, To Böerhaave, in *Europe*. Bordeu, in his Thesis, produced at the age of twenty-one, commenced his attack on that doctrine, and displayed some of those conceptions that were the foundation for the revolution that has since ensued.—Edit.

Whence comes this bile which is thus shown in the blood? Is it not evident that it reflows from the liver, and that it is impelled by the action of this viscus: this action is too forcible, and the vibrations are ill directed. But, do not these periodical returns prove two things? One, that the liver has, like all other *active* glands, a particular action for the discharge of the fluids which it separates, or for their separation; and the other, that this action is renewed, or augmented, or comes on, precisely during the time of taking food.

Those who are subject to certain colics, which have a great relation to the liver, and which are often the consequences of stones contained in the gall-bladder, have they not paroxysms, or more severe attacks, of these colics during the process of digestion? Do they not feel constrictions, stiches, and drawing sensations, in the hypochondres?

We might also relate what takes place in melancholic patients, in whom it is easy to perceive that the stiches, tremulous sensations, and dull pains, of which they complain, in the right side, have their seat in the liver: let us, however, only speak of those who are subject to hæmorrhoids. When the flux of blood is about to happen, the patients feel painful stiches and sharp darting sensations, which commence towards the right hypochondre, and which proceed in a downward direction to the left side. Is it possible to doubt that the liver, and the parts connected with it, are not in action in these cases?

Lastly, those who suffer schirrous tumors and chronic abscesses in the liver, have pains, in a manner periodical, in the hypochondre. These pains are more or less fixed, and they are experienced more at one time than at another; and ordinarily they are increased during the process of digestion.

The patients in question are also subject to darting pains in the whole of the right side, about the neck and face, and to numbness of the arm and lower extremity of the same side: after these darting pains have continued for some time, swelling comes on in the right side, the face, the arm, the leg, the hypochondre, &c.

All these observations, which daily experience confirms, demonstrate, it appears to me, that the liver has a peculiar action, and that it exerts it especially during the time of digestion. They also show that there are parts dependant, in a manner, on the liver; since, when that organ is diseased, they experience the effects of it: these are in the department of the liver.

An examination of what passes in the Spleen.—Whatever may be the principal use of the spleen, we shall demonstrate that it has a peculiar action, and that it exerts it at marked periods; and, lastly, that it has a very extensive department.

Let us first make use of the remarks of M. Duvernoy and those of M. Lieutaud, which we have in part confirmed. The spleen is of a different colour, and different in size, in dogs, when they are opened whilst digestion is going on, and when it is completed: if the stomach be full, the spleen is *folded up*, white, and hard; on the contrary, it is more soft, more red, and larger, when the stomach is not full. These observations cannot be disputed.

We do not however believe, as it has been done, that the diminution in the bulk of the spleen arises from the compression made on it by the stomach; it appears, that there is no state in which the spleen is not harder than the stomach. Although there were not many reasons which we will not here detail, this remark alone is sufficient to prove that the spleen is never compressed by means of the stomach.

How do the changes we have mentioned arise then? The following observations will perhaps explain them. The stomach admits blood much more easily when it is full than when it is empty; the circulation is carried on better in this organ when it is distended than when it is empty: now, since the spleen and the stomach have arteries from one trunk, it follows, that, when the blood flows more readily into the stomach, the spleen will receive less of that fluid.

We must also add, that the spleen contracts itself by its own power, for the want of blood would not render it hard: it has its peculiar action; and this action, which diminishes the volume of this viscus, causes the blood to go in greater quantity to the stomach, to the pancreas, and apparently to the liver itself; and this precisely when secretion should be augmented in all these viscera.

The spleen may then be regarded as an organ, which, when it is full, diminishes the quantity of fluids in some other viscera; and which, when it contracts or empties itself, augments the quantity of those fluids. We might, in this sense, consider the spleen, in certain respects, as a sort of reservoir, which we have already remarked: we do not, however, mean to say, that this is the principal and the only use of it.

Whatever it may be, the action of the spleen shows itself still better in what we perceive in some diseases. Those who have tumors and suppurations in this viscus, experience in the left side similar disorders to those which are found in the right when the liver is morbidly affected,—as darting pains, flutterings, distensions, &c.

We have seen a man who had a schirrous tumor in the spleen, who ordinarily, towards the hours of eight or nine in the morning, had the left foot almost totally benumbed; and the cheek of the same side cold as marble, whilst the right was very hot.

We should never end, were we to treat of all the pains in the head, fluxions of the left eye, pains in the ear of the same side, cramps, and many other phenomena, observed on the left side of those who have disease of the spleen.

This, then, is another viscus, apparently glandular, that has its action and its department, and performs its functions after certain intervals.

This is not the place to examine whence these communications, or these relations of one part to another, arise; and how the shocks and thrills extend from the affected viscus, as from a centre.

It is sufficient, that what we have advanced is founded on incontestible observations, and which those who regard patients with some attention will not deny.

*History of the Case of a Woman, whose Skin became Black consequently to a violent Moral Emotion.**

Mary Agnes Letellier, 75 years of age, born at Troyes in Champagne, of white parents, and herself perfectly white until the period of the accident we are about to describe, of a feeble constitution, had menstruated irregularly, and had, during her life, experienced a variety of maladies; she had aborted twice, experienced an inguinal hernia, had luxated the femur, and been affected with various attacks of inflammation of the thoracic and abdominal viscera.

Towards the commencement of the French revolution, she was charged with having uttered some benevolent expressions respecting the king, imprisoned, and condemned to death for this imputed crime. The fatal lantern, the instrument of her destruction, was soon let down before her. At this terrific object, menstruation, which she then experienced, immediately became suppressed. Her execution was suspended by the intercession of some person of high authority. Soon afterwards (she said a few days) her skin assumed the colour it ever afterwards preserved. The hue of her countenance became like that of the less dark negroes, but her features did not suffer any alteration of form. The colour became deeper in the neck and shoulders; the chest was of nearly the same degree of blackness as the face. The skin covering the abdomen and lower extremities was not so dark as that of the chest. What was very remarkable, was the marbled appearance on the limbs, arising from the interspersion of white spots; this is also remarked in the American blacks. The joints of the fingers were blacker than the other part of them; the soles of the feet, palms of the hands, and folds of the inguinal region, were the least coloured parts of the whole body. From the time of this afflicting event, the health of the patient became more and more languishing; she became subject to beating in the head, with sense of oppression and general uneasiness. She at length fell a victim to chronic inflammation of the intestines, in the month of April 1819. During the whole time of the disease the skin was supple, and even oily; cutaneous perspiration did not appear to be either diminished or increased; the scales of which the cutaneous tissue is composed were larger than ordinary.

A vesicatory was applied in the course of the disease, and the epidermis raised by its action was perfectly transparent. The subjacent tissue was brownish.

Examination of the dead body.—External appearance. The colour of the skin had not suffered any change. *The mucous tissue, separated from the dermoid and epidermoid texture by maceration, was brown, like that of negroes.* All the other tissues had preserved the colour natural to whites.

The head.—The brain was perfectly healthy in appearance, as were its envelopments; there was rather an abundant effusion of serum into the ventricles.

The chest.—There were old adhesions of the pleura, but no apparent alteration of the parenchymatous structure of the lungs. The peri-

* Related by M. Rostan, in the *Nouveau Journal de Medicine,* Mai 1819.

cardium was about a line in thickness, and of so cartilaginous and dense a consistence, that it was impossible to distinguish whether or not it was formed of super-imposed layers. The heart was voluminous, the sides of the ventricles very thick and firm; but all the openings were free, and all the cavities in their natural state. No unusual opening, no extraordinary communication, was remarked.

The abdomen.—The mucous membrane of the stomach was slightly injected with blood, in dispersed patches. This organ contained a liquid, rather abundant in quantity, of an opake-yellow colour, much resembling the yolk of an egg dissolved in warm water. The small intestines were much injected, and presented unequivocal traces of inflammation. They contained similar matter to that in the stomach, only it was of greater consistence.

The liver was perfectly healthy, and it did not appear ever to have been diseased. The passages of the gall-bladder and biliary ducts were not at all obstructed, and the contained bile passed with the greatest readiness into the duodenum. The spleen, pancreas, kidneys, and bladder, did not show any vestige of alteration from the natural state.

Observations on the Plague. By Dr. James Grey Jackson.

His Majesty's ship which was lying in the port of Alexandria when Colonel Fitzclarence passed through Egypt from India, on his way to England, convoyed to Tangier a vessel which had on-board two of the sons of Muley Soliman emperor of Morocco. On their arrival at Tangier, the princes immediately landed, and proceeded to their father at Fas; but it was discovered by the governor, or alkaid, of Tangier, that, during the passage, some persons had died; and, accordingly, the alkaid would not suffer any of the passengers to land, except the princes, until he should have received orders from the emperor how to act: he accordingly wrote to Fas for the imperial orders, and in the mean time the princes arrived, and presented themselves to the emperor. The latter wrote to the alkaid, that, as the princes had been suffered to land, it would be unjust to prohibit the other passengers from coming ashore also: he therefore ordered the alkaid to suffer all the passengers, together with their baggage, to be landed; and soon afterwards the plague appeared at Fas and at Tangier. Thus, the contagion which is now ravaging West Barbary, was imported from Egypt. It does not appear that the mortality is, or has been, during its acme at Fas, any thing comparable to what it was during the plague that ravaged this country in 1799, and which carried off more than two-thirds of the population of the empire.

Whence proceeds this difference? Is it a different species of plague, and not so deadly a contagion? or is it because the remedy of *olive oil*, applied and recommended generally by me, and by some other Europeans, during the plague of 1799, is now made public, and generally administered? This is an inquiry well deserving the attention of scientific men; and his Majesty's ministers might procure the information from the British consul at Tangier, or from the governor

of Gibraltar. Perhaps the truth is, that the contagion is of a more mild character.

With regard to the remedy of olive oil applied *internally*,* I should myself be disposed to doubt its efficacy, unless M. Colaco, the Portuguese consul at l'Araich, is competent to declare, from his own knowledge and experience, that this remedy has been administered effectually by him to persons having the plague, who did not also use the friction with oil. I say, till this can be ascertained, I think the remedy of oil applied externally should not be forsaken; as it has been proved, during the plague in Africa in 1799, to be infallible, and therefore indispensable to people whose vocation may lead them to associate with, or to touch, or bury, the infected. For the rest, such persons as are not compelled to associate with the infected, may effectually avoid the contagion, however violent and deadly it may be, by avoiding contact. I am so perfectly convinced of this fact, from the experience and observation I have made during my residence at Mogodor, whilst the plague raged there in 1799, that I would not object to go to any country, although it were rotten with the plague, provided my going would benefit mankind, or serve any useful purpose; and I would use no fumigation, or any other remedy, but what I actually used at Mogodor in 1799, which I have detailed in the description of the plague, inserted in my account of Morocco, Timbuctoo, &c. I am so convinced, from my own repeated and daily experience, that the most deadly plague is as easy to be avoided *by strictly adhering to the principle of avoiding personal contact and inhalation, and the contact of infectious substances*, that I would ride or walk through the most populous and deeply-infected city, as I have done before, without any other precaution than a segar in my mouth; when, by avoiding contact and inhalation, I should most assuredly be free from the danger of infection!

When these precautions are strictly observed, I maintain, (in opposition to all the theoretical doctrines that have lately been propagated,) that there is no more danger of infection with the plague, than there is of infection from any common cold or rheum.—*Journal of Science and the Arts*, No. XV.

An Alphabetical List of the Plants and other Articles of the Materia Medica mentioned in the Works of Hippocrates, *with the Latin Version of* Föes, *and the Synonyms of* Linnæus. [Extracted from a Memoir by Dr. Paulet.]

[*Continued from page 300.*]

Γαλβανον; *voyez* Χαλϐανον.
Γιγαρτα; ο; *pépins de raisin.*
Γληχον; pulegium; mentha rotundifolia.
Γληχον χλωρον; polygonum viride; mentha pulegium, ou M. viridis?

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* "M. Colaco having lately observed that oil was used externally to anoint the body, as a preservative against the plague, conceived the idea of administering this simple remedy *internally* to persons already infected. Numerous experiments were made by this gentleman; and, out of 300 individuals already infected, who resorted to this remedy, only twelve died."

Γλυκυρριζη; glycyrrhiza; glycyrrhiza glabra.
Γλυκυσις; pœonia; pœonia officinalis.
Γογγυλις; rapum; brassica rapa, ou B. oleracea
Δαις; tæda; *résine du* pinus pinea.
Δαφνη; laurus; laurus nobilis.
Δαφνοιδης; daphnoïdes; daphne laureola.
Δαυκος; daucus; buplevrum fruticosum?
Δαυκος κρητικη; daucus cretensis; athamanta cretensis.
Δαυκος αιθιοπικος; daucus æthiopicus; scandix odorata?
Δικταμνον; dictamnus; origanum heracleotium.
Δικταμνον κρητικον; dictamnum creticum; origanum dictamnus.
Δολιχος; phaseolus; phaseolus vulgaris.
Δρακοντιον; dracontium; arum dracunculus.
Δρυοπτερις; filix querna; polypodium dryopteris.
Εβενον; Ebenum; Diospyros ebenum.
Ηδυοσμος; mentha; mentha sativa.
Ελαια; olea; olea europæa.
Ελαια λευκη; oliva alba; *olive verte ou non mûre.*
Ελαιον αιγυπτιον λευκον; oleum ægyptium album; *huile du* sesamum orientale.
Ελατεριον; elaterium; *extrait du* momordica elaterium.
Σλελισφακος; salvia, mentha; salvia officinalis.
Ελενιον; helenium; hyssopus officinalis.
Ελλεβορος; veratrum; o.
Ελλεβορος μελας; veratrum nigrum; helleborus orientalis, Lamarck.
Ελλεβορος λευκος; veratrum album; veratrum album.
Εγλεβορος μακθαλος; veratrum molle; helleborus orientalis.
Ελξινη; elxine; polygonnm convolvulus? parietaria vulgaris? atractylis gummifera.
Ενανθεμον; enanthemum; adonis vernalis.
Επιπετρον; epipetrum; asplenium ruta muraria.
Επιθυμον et επιθυμον λευκον; epithymum album; cuscuta epithymum.
Ερεβινθος; cicer; cicer arietinum.
Ερευθεδανον; rubia; polygonum bistorta.
Ερικη; erica; erica vulgaris?
Ερπυλλος; serpillum; thymus serpillum.
Ερυον; ervum; ervum ervilia.
Ερυσιμον; erysimum, iris; erysimum vulgare.
Ερυθροδανον; rubia; rubia tinctorum.
Ετριγης; tragus, olyra; hordeum zeocrithon.
Ευσανθεμον; chamæmelum; achillea millefolium?
Ευζομον; eruca; brassica eruca.
Εχετροσις; bryonia alba; clematis vitalba.
Ζεα; siligo; triticum spelta.
Θαψια; thapsia, ferulago; thapsia asclepium *ou* garganica.
Θερμος; lupinum; lupinus albus.
Θλασπι; thlaspi; iberis amara.
Θλασπι λειον; thlaspi lævigatum; iberis semperflorens.
Θλασπι ποκιον; o; iberis umbellata.
Θριδαξ; lactuca; lactuca sativa.
Θυμβρα; thymbra; satureja thymbra *ou* S. hortensis.
Θυμον; thymum; satureja capitata.
Ινδικον; indicum; vitex negundo.
Ιξος; viscum; viscum album.
Ιον; viola; viola odorata.
Ιππομαραθρον; hippomarathrum; cachrys sicula.
Ιπποφαη; hippophae; euphorbia spinosa??
Ιπποσελινον; ipposelinon, hipposelinum; pastinaca opopanax *ou* P. sylvestris.

Ιρις; iris; iris sambucina *et* I. florentina.
Ισατις; isatis; isatis tinctoria.
Ισχας; carica; *fruit sec du* ficus marisca.
Ισχεδιας μικρος et μεγαλη; anchusa parva et magna; anchusa officinalis; angustifolia, lycopsis arvensis.
Ιτεα; salix; salix.
Καχρυς; cachrys, ros marinus, hordeum; imperatoria ostruthium, laserpitium latifolium, triticum turgidum, hordeum hexasticum.
Καλαμινθη; calamintha; melissa calamintha.
Καλαμος; calamus aromaticus; andropogon nardus.
Καλλιφυλλον; *voyez* αδιαντον.
Κανθια; canthia.
Καππαρις; capparis; capparis spinosa.
Καρδαμωμον; cardamomum; amomum cardamonum.
Καρδαμον; nasturtium et cardamum; lepidium sativum.
Καρδαμον αγριον; cardamum agreste; lepidium lyratum *ou* L. latifolium.
Καρυα ποντικα; nuces ponticæ; *fruits du* corylus avellana.
Καρυα στρογγυλα; nuces rotundæ; *fruits du* juglans regia.
Καρυον θασσιον; nux thasia; *fruits du* juglans fraxinifolia.
Κασιη; casia; amomi species ??
Καυκαλις; caucalis; cordylium syriacum.
Κηκις; galla; *galle du* quercus infectoria.
Κεδριδες; cedri baccæ; *fruits du* juniperus oxycedrus.
Κεδρος; cedrus; juniperus oxycedrus.
Κεδρος κρητικη; cedrus cretica; cedros cretica, Tournefort.
Κεγχρος, κεγχρον; milium; panicum miliaceum.
Κεγχρυς et κεγχρυθας; milium, milii grana; *fruits des* panicum miliaceum et italicum.
Κενταυριον; centaurium; inula helenium, centaurea centaurium; gentiana lutea.
Κεστρον; betonica; betonica officinalis.
Κινναμομον; cinnamomum; o.
Κισσος; hedera; hedera helix.
Κισθος ou κιστος; cistus; cistus salvifolius *et* C. pilosus.
Κλεματις; *voyez* εχετροσις.
Κνεκος; cnicus; carthamus tinctorius *et* C. cæruleus.
Κνεορον; cneorum; convolvulus cneorum, daphne alpina.
Κνεστρον; cnestrum; daphne cneorum?
Κνικος; *voyez* κνεκος.
Κνιδη; urtica; urtica urens *et* U. dioïca.
Κοκκαλος; nux pinea; *pignon du* pinus pinea.
Κοκκος κνιδιος; granum cnidium; *fruit du* daphne gnidium.
Κοκκος; granum; *gallinsecte du* quercus coccifera?
Κολοκυνθη; cucurbita, colocynthis; cucurbita pepo.
Κολοκυνθις αγριη; cucurbita sylvestris; cucumis colocynthis.
Κομμι λευκον; gummi album; *gomme du* mimosa horrida.
Κωνειον; cicuta; conium maculatum.
Κονυζη; conyza; inula montana.
Κονυζη δυσοδης; conyza fœtida; inula fœtida.
Κονυζη ηδυοσμος; conyza grati odoris; inula odora *ou* I. bifrons.
Κοριανον et κοριον; coriandrum; coriandrum sativum.
Κοτυληδον; umbilicus Veneris; cotyledon umbilicus Veneris.
Κραμβη; brassica; brassica.
Κρανιον; cornus *et* corna; *fruit du* cornus mas.
Κραταιγονον; *voyez* πολυκαρπον.
Κρηθμον; crethmon, crithmon; crithmum maritimum.
Κρινανθεμον; crinanthemum; lilium candidum.

[*To be continued.*]

CRITICAL ANALYSIS

OF

RECENT PUBLICATIONS, IN THE DIFFERENT BRANCHES OF MEDICINE AND SURGERY.

"I would have men know, that, though I reprehend the easie passing over of the causes of things, "by ascribing them to secret and hidden vertues and properties; (for this hath arrested and laid "asleepe all true enquiry and indications;) yet I doe not understand but that, in the practical "part of knowledge, much will be left to experience and probation, whereunto indication cannot "so fully reach: and this not only in *specie*, but in *individuo*. Yet it was well said, *Vere scire* "*esse per causas scire*."—BACON.

Elements of Medical Logick, illustrated by practical Proofs and Examples; including a Statement of the Evidence respecting the Contagious Nature of the Yellow-Fever. By SIR GILBERT BLANE, Bart. Fellow of the Royal Societies of London, Edinburgh, and Gottingen; Member of the Imperial Academy of Sciences of St. Petersburgh; and Physician to the Prince Regent. 8vo. pp. 219. London: T. and G. Underwood. 1819.

[*Concluded from p.* 314.]

THERE can be no question more interesting to the young physician of liberal acquirements and a reflective disposition of mind, than that relating to the importance of physiological and other scientific knowledge, in its application to medicine as an art. The history of the revolutions of medical opinions in different ages, and of their diversity at the present period, will rather add to his embarrassment than lead him to any determinate mode of conduct.

The method of HIPPOCRATES, so generally approved by experienced physicians, he will find to have been strictly enlightened empiricism. Many things, however, tend to make him not regard this in a favourable manner: he is unwilling to believe that the greater part of his laborious scholastic studies can be of so little utility to him as that method would inculcate; and he turns with eagerness to the opinions of the dogmatists, so flattering to his own inclinations. But let him pass in review the most brilliant systems of the methodic sect, whose precepts they have followed, and contemplate the results of the application of those of ERASISTRATUS, GALEN, PARACELSUS, BOERHAAVE, HOFFMANN, CULLEN, and BROWN; and he will be in doubt whether the benefits some of those have conferred on human nature, have not been counterbalanced by the ills that have emanated from others. The doctrines of another sect, especially if he be disposed to metaphysical reflection, will then appear in the most glowing colours. Its votaries will tell him, that the human body, which possesses the power of its own preservation;—of appropriating to its use aliment and air;—of resisting the de-

structive influence of various external agents, and of re-producing parts that have been destroyed by others;—may be well supposed to be able, in most instances, to restore, without the aid of art, the harmony of its actions, when accidental circumstances have thrown them into disorder. To observe the progress of the actions necessary to effect this through their different revolutions, without attempting to interfere with them when they proceed in a proper manner; and to regulate them, if they casually deviate from it, by such means as experience may have shown to be successful in similar cases, is, then, considered to be the only proper conduct of the true physician. But, there is only one step from this to absolute Pyrrhonism; the gloomy and repulsive regards of which will probably drive him from the paths of the *Naturists*, although they have been adorned by almost the finest genius that ever walked in the regions of medical science. The *Eclectics* will point out the course of SYDENHAM, BARBEIRAC, and BAGLIVI, to his view; but he will sometimes be obliged to turn aside from them, and will then, notwithstanding the assurances of his advisers, often find himself in the midst of a mere chaos, constituted of the dispersed ruins of other systems.

Has not medical knowledge, then, attained such a state as to admit of some conclusions on this subject, that may serve as general principles for the conduct of the young physician? This interesting question is discussed in the second section of the work before us.

In order to preserve a connected view of the subjects of this treatise, we should advert to the physiological dissertations that have already engaged our attention; or, from the want of any application of them, it might appear that our analysis had not preserved an unbroken train. The following paragraph will exculpate us in this respect, though it will probably lead the reader to criminate us in others; since we have not been able to discern the peculiar view to which the author therein alludes:

"The author has thus endeavoured to enumerate and define the primary elements, or ultimate facts, belonging exclusively to animated nature. In an attempt which is new,—in a subject, of which he has taken a view peculiar to himself,—he does not dare to think that he has attained any thing like perfection. It is evident, however, that it is only by following out an analytical scheme of this kind, that a foundation can be laid for the genuine principles of theoretical medicine; for the elements of disease can only be expounded by a thorough knowledge of the elements of life and health. But it is not his intention now to apply it synthetically, by building upon it any system of nosology, physiology, or pathology; far less to bewilder himself or his reader, by agitating the question, whether life consists in the play

of those principles, or if it is something superinduced on them. His sole object, in this analysis, is to convey an adequate conception of the great difficulties which those have to encounter, who would found practical medicine on a knowledge of the animal economy; and to bespeak a liberal indulgence for the errors of those, who, in attempting this, have had to grope and wander in more dark and intricate mazes than what has fallen to the lot of any [other] class of enquirers into the various departments of nature."

We repeat, we have not been able to discern the author's peculiar view in the preceding dissertation, either as relates to physiological principles or the pathological application of them; except the following remark, relating to the *restorative energy*, may be considered to be a glimpse of it. We retrace our steps to adduce it.

"If one of the morbid poisons exciting fever, should assail life by attacking one of its fundamental principles, the generating power of heat, this principle may re-act with such violence, as to make it one of the main objects to repress it, either by internal remedies, or by the external application of cold; and the converse of this will happen, should the re-action be too feeble. This is not to be considered as an adopted theory, but merely a matter of hypothetical illustration."

The reader will, we hope, excuse our making any remarks on this notion, and not consider that, in avoiding it, we shrink from the performance of our duty. The author promises to advert to this subject under another head; but we have not been able to discover where he has done this, unless the query, whether the *determination* to particular organs may not be considered "as a function by itself," dependant on the motive energy, may be thus regarded.

We now return to the discussion on the utility of anatomical and physiological knowledge in the practice of medicine. The author first adverts to the errors that have arisen from the attempts made to explain the functions of animal bodies by the application of chemical and mechanical laws; and then takes a partial view of the circumstances that in different ages have either favoured, or retarded, the progress of practical medicine. In the rude state of society, he remarks, this seems to have been more indebted to those who discovered active and useful medicines, than to the labours of the learned. He passes a tribute of praise to Democritus and Hippocrates; and to Aristotle, as a "most diligent observer of nature and collector of facts;" but, he continues, the syllogistic logic of this philosopher soon usurped the place of all literary and scientific pursuits. Yet Sir Gilbert Blane acknowledges, that, "in those dark times, [the middle ages,] it was better than no knowledge at all; and I am one of those who are of opinion, that this logick, though it affords little or no assistance in the discovery of practical truths,

and the interpretation of nature, *is yet an excellent discipline of the mind, tending to give precision to language and thought;* more, indeed, in moral science and literature, than in the physical and exact sciences; *and that some knowledge of it can hardly be dispensed with in a liberal education.* I am thankful that it made part of the academical education which I received."

We have been particularly pleased with the sentiments in the above paragraph which we have taken the liberty to transcribe in italic characters, and wish Sir Gilbert Blane had expressed his opinion respecting the mathematics in a similar point of view: we think he must equally approve of the study of them; and they are now strangely neglected by physicians in general. MEAD said, he hoped to find this species of knowledge become thought as necessary to a physician as the acquisition of the Greek and Latin languages; but, when the student reads his treatise on the Bite of the Tarantula Spider, and perceives the use that physician made of it, he must be disposed to treat his opinion on this subject with contempt: and the authority of Hippocrates and Galen will probably not be regarded with much more respect.

The merits of BACON are next alluded to, and appreciated: Sir Gilbert Blane, however, objects to his opinions respecting the utility of searching after first causes; but we never before saw them regarded in the manner in which he seems to view them.

Medicine, however, he continues to observe, did not avail itself of the light which broke upon science in general in the seventeenth century; but rather, from the wrong application of the physical sciences, became turned from its course, and oppressed with new errors. Even the knowledge of the circulation of the blood, "by its perverted application, tended to corrupt and mislead, by a loose adoption of the principles of mechanical philosophy, so well laid down in that age by Galileo and others."

We cannot have a more forcible illustration of this, than the manner in which the determination of the fluids to particular parts was for a long period regarded, and is indeed at the present time, by many physicians. The powerful influence of the nervous system in regulating the circulation, the peculiar action of the capillary arteries, and the distinct circles, as it were, formed by particular organs, have by them been lost sight of; and, consequently, with this, the true knowledge of the real nature and origin of numerous diseases.

The well-known errors of the mechanists are then brought into view, especially those of BOERHAAVE; though the author does not neglect to pay a just tribute to the talents and acquire-

ments of that celebrated medical reformer. But here Sir Gilbert Blane proceeds in too rapid a manner; since he passes over unnoticed the true founder of the present system of physiology to arrive at CULLEN, who, he says, "first clearly marked, and defined, the principles of life, as distinguished from those of dead matter."

Let us indulge in some remarks on this subject. We shall apologize for these, and some other circumstances respecting our conduct in the review of this work, before we conclude.

GLISSON may be considered as the legitimate founder of the present doctrine of vitality. He announced that matter is not wholly *inert*, as almost all the moderns who followed the doctrines of PLATO had believed. He supposed it to be essentially active; and that the properties thus given to it by the Author of nature, were the cause of the phenomena we observe, not only in the great bodies of the universe, but also in chemical changes, and in the re-actions of organized bodies on external agents. This doctrine he applied in a particular manner to the functions of the animal economy; and gave the term *irritability* to the power which organs derive from the active properties of the matter of which they are composed.* LEIBNITZ and HOBBES supported these opinions; and GORTER afterwards extended the application of them to plants.†

It remained for HALLER fully to develope and illustrate these principles, in such a manner as to leave no doubt respecting their truth in the mind of any man who has well examined them, and who will "on reason build resolve." Nothing remained to be effected but the discovery of some of the more minute relations of the phenomena to which they give rise; and, since his labours, they have formed the basis of physiology. The theory thence formed was applied to pathology with the utmost precision by BORDEU, who flourished before CULLEN; though the latter, from his situation as a professor in one of the most celebrated schools of Europe at that period, gave it the *eclat* necessary to lead to its general adoption.

Many physicians have expressed doubts of the utility of this sort of knowledge to the art of medicine; and Sir Gilbert Blane thinks them worthy of so much attention, as to be made the subject of a formal examination. After some general reflections on this subject, he proposes the following query:

"Are we, then, to admit, that the greater part of what we have been taught at the schools of physic, and of what we have read, or may read, in books, is in no wise conducive to our practical improvement?"

Far from it, he replies,—for

"Though anatomy, physiology, and pathology, should be proved

* See his Treatise *De Ventriculo et Intestinis*; 12mo. 1677.

† *Exercitationes Medicæ Quatuor*; Amstelodamiæ, 1737.

to be of little or no avail,—nay, of pernicious tendency, in the practice of physic, the acquisition of these branches of education is nevertheless indispensable, in order to be armed with antidotes against the influence of fallacious theories, and to obtain the guidance of true beacons, instead of false lights. There is nothing better known to those who are conversant in medical practice, than that the most ignorant and shallow, those of the least learning,—nay, those of no learning at all,—are the most addicted to hypothetical reasoning, the most infected with presumption and conceit.

"The knowledge of nature in all its branches," he also observes, "is an indispensable requisite in the cultivation of the mind. It is highly useful, were it only as a gymnastic exercise of the understanding, by that salutary discipline of the mental faculties, implied in the acquisition of habits of attention, and the practice of the reasoning powers. Besides, all arts and sciences have a bearing on each other; and the history and philosophy of animal life, is surely as necessary an accomplishment to a physician as any other branch of science or literature."

It also, Sir Gilbert Blane says, tends to free the mind from superstition, which has exerted so much deleterious influence in the practice of medicine.

The concluding reply is somewhat more favourable to the cause of physiological knowledge, though much of its force must be averted by the reflections contained in those which have preceded it.

"It must be obvious to every reflecting mind, that those who have made themselves acquainted with the various organs and functions engaged in the animal economy, must have a great advantage in practice over the unlearned empiric, in discriminating the morbid affections from each other, and in varying accordingly the respective means of relief. For instance, a physiologist and anatomist, from his knowledge of the intimate nature of morbid affections, the difference of their seat, and other circumstances, is able to distinguish spasmodic from inflammatory pains; a distinction which would not readily occur to an uncultivated observer, but of the most vital importance in practice; for the remedies required for the relief and cure of a spasmodic pain in the stomach and bowels, demands a treatment not only different, but opposite, to that which proceeds from inflammation. It is only anatomical and physiological science that can give a practitioner a clear and vivid conception of these and other distinctions essential to the safe and efficient treatment of diseases.

"Whatever doubts there may be with regard to the degree in which anatomy is useful in physic, there can be no doubt of it with regard to surgery, in which an accurate knowledge of the relative position and structure of organs is indispensable."

"But," the author then observes, "if the benefits derivable to medicine from physiological science are so limited, from

what other and better source is improvement to arise? The answer is, from accurate observation: in other words, from enlightened empiricism." Of this Sir Gilbert Blane gives a well-drawn and impressive character, though it is rendered a little abstruse by his peculiar opinions respecting the responsiveness of our mental faculties to the constitution of external nature. We transcribe from it the following passage, which contains some notions, that, to say the least of them, are ingenious, and certainly merit the attention of those who are disposed to philosophical reflection.

"The avoiding of fire, of precipices, the collision of hard and pointed bodies, may be quoted as examples of this [the responsiveness of our mental faculties to the constitution of external nature]. And what is called sagacity, in the adult ages of life, is a sort of approach to, or imitation of, this intuitive faculty; but, instead of being the immediate suggestion of nature, is founded on cultivation, which, by practice, learns to connect cause and effect, means and ends; an operation which, in well-turned minds, is performed with promptitude and precision, by interpreting fairly the appearances of nature, and stripping them of those adventitious fallacies which mislead ordinary minds. In order to attain this, there are required an appropriate natural capacity, the good fortune of not being beset with prejudices in early life, an habitual exercise in the observance of nature, a candid and ingenuous disposition, an ardent love of truth, an exalted sense of duty, a large store of facts in a correct and tenacious memory, the power of combining, comparing, and discriminating, these, by an intuitive glance, in the moment of applying them to the practical end in view. This is what is understood by the term *tact* in English and French, and εὐστοχια in Greek; being the faculty by which practical facts are decided on, and is performed by an instantaneous, silent, and almost unconscious, calculation and induction, to be met with only in minds at once happily constituted and highly cultivated."

We have now only to adduce the author's general conclusion, in order to complete our analysis of this part of the work. We shall give this in his own words.

"From all that has been said, we ought to be in some measure qualified to come to a decision on the celebrated question of the comparative merits of the empirical and dogmatical methods of cultivating physic. It seems pretty evident, that, if either method were employed exclusively, or carried to an extreme, the art of physic would suffer, both in its efficiency and its prospects of future improvement. It has clearly appeared, that, under such a complication of causes, influencing the operations of life, it would be utterly hopeless to decide any point purely and strictly *à priori;* and that it is absolutely necessary that experience be called in as an aid and a test to the inferences of theory. On the other hand, a blind empiricism would be found deficient, without that discriminative judgment, founded on an acquaintance with the laws of life, and without those enlarged and correct

views of general nature, by which the excess of credulity and scepticism is equally repressed."

Having thus considered the chief of the obstacles to the progress and improvement of medicine, and the errors and abuses of false or misapplied theory, the author proceeds to that of the rest: these he supposes to be, *the great diversity observable in the constitution of individuals; the difficulty of appreciating the efforts of nature, and of discriminating them from those of art; superstition; the ambiguity of language; and the fallacy of testimony.*

The varieties in the character of disease arising from an identical cause, and the diversity in the operation of certain remedies, exemplified particularly in that of purgatives, form the subjects for illustration of the first of the above series; and this section concludes with questioning whether it would be too much to affirm, that all the practical works in existence ought to be re-composed, in order to insert in them, for the benefit of mankind, and the credit of the profession of physic, the following qualifying words: "The practice recommended will be found to answer in a great majority of cases; but there are numerous exceptions to it, which it behoves every judicious and conscientious practitioner to bear in mind."

On the next subject the author makes some general remarks only; but they bear the character of the rest of the moral reflections comprised in this work, of which we shall hereafter speak. Of the influence of superstition, he alludes to several remarkable instances; as, the unresisting submission to the progress of the plague of the Mahomedans; the opposition to inoculation of the small-pox from religious prejudice; the belief in the powers of magic, amulets, &c. in the cure of diseases, many curious examples of which he has adduced from the works of Sir Theodore Mayerne; though, the author also remarks, superstitious practices ought not in every instance to be disregarded, since the rust of Telephus's spear, mentioned by Homer as a cure for the wound it had inflicted, was undoubtedly a useful remedy.

The ambiguity of language, is illustrated by the application of the terms *scurvy* and *yellow-fever;* and on the latter subject the author enters into an elaborate discussion, founded on observations deduced from very extensive researches; the chief object of which is to prove that what is properly yellow-fever, is a contagious disease. In force and precision, and methodic arrangement, his arguments cannot be excelled, and they must bring conviction to all who admit the data on which they are founded; but, we think, before this question can be decided in a manner that will be generally satisfactory, it must be first determined what is to be considered as yellow-fever; or else

similar arguments to those used by Sir Gilbert Blane may be brought to show that that disease is not contagious. His data are derived from a division of the fevers of hot climates into three classes: the *endemic*, arising from marsh effluvia; the *pestilential* or *malignant* disease, or *typhus icterodes* of Sauvages and Cullen, from human effluvia; and the *sporadic*. The second, Sir Gilbert Blane states to be yellow-fever. Now, other physicians will assert, that it is the first which should be thus termed; and, for proof, refer to that which raged in the United States in 1794, 1797, and 1800, and especially at New-York in 1805, which was by general consent termed yellow-fever; and there can be but little or no doubt of its being caused by marsh effluvia. Rush at last abandoned the notion that it was propagated by contagion, although at first an advocate of that doctrine; and few men have been more cautious in judgment than him, and certainly not many better qualified to form a correct decision.

The observations and remarks on the fallacy of testimony, are too multifarious to be even alluded to in a concise manner: we can only say, that the reader will find amongst them many useful hints and judicious reflections, particularly valuable at a time when there exists a sort of rage for acquiring what are called new facts, instead of a disposition to meditate on those which are already known, and which have been established by the testimony of successive ages.

Before we part with the reader on this occasion, we have some apologies to make, and some remarks to adduce, that we particularly desire to impress on his mind. The first relate to the extent to which this article has been prolonged, chiefly by the minuteness with which we have examined some parts of the work to which it relates, and the passages introduced being somewhat adventitious to the subject under immediate consideration: we should add, too, any part of our examination which he may probably think bears a tone of undue severity. We request him to reflect on the interesting nature of the subject here discussed, and on the great importance it is to the welfare of our art, that no principles should be formally and systematically proposed as valid bases for our reasonings, that are not well defined in their character, and substantiated by indisputable arguments. For the rest, our desire to give a perspicuous view of the object of the work must serve as our excuse.

With respect to the question of the propriety of considering this work as a treatise on Medical Logick, even as far as relates to physiology, we have shown that we cannot form a determined judgment, generally, because we have not been able to comprehend the author's meaning on some occasions; though, on others, we have considered his opinions to be hypothetical,

consequently, not proper for the principles of a system. It was from the difficulty just alluded to, that we were led to express so earnest a desire, on a former occasion, that the reader should peruse the work itself: otherwise, we fear, he may attribute that difficulty to dullness in us, rather than to real obscurity in the author. But we have other reasons for recommending this work to his attention. It has here been examined more expressly in its medical relations: we have, consequently, passed slightly over, or wholly neglected, what we believe to be the best and most useful parts of it,—the many good moral reflections it contains; we should add, too, many physiological observations, adduced as illustrations of given principles, which we could not apply in the manner the author has done, and therefore neglected to notice them. But it is the dispersed moral reflections that we have regarded with most pleasure: these form a series of traits of the medical character, calculated to exalt its dignity, in a scientific and moral point of view; and, when possessed, will render the physician really qualified for the practice of an art *Deorum immortalium inventioni consecrata.*

An Enquiry, illustrating the Nature of Tuberculated Accretions of Serous Membranes, and the Origin of Tubercles and Tumors in different Textures of the Body. By JOHN BARON, M.D. Physician to the General Infirmary at Gloucester. 8vo. pp. 307; with Engravings. London: Longman and Co. 1819.

On noticing this work on a former occasion, we stated it to be our intention to defer the particular examination of it, until we could comprise at one view the whole of the observations and opinions of the author on the different subjects to which it relates; and since he has not, in the present volume, adduced his general conclusions,—and, indeed, many of the facts on which the theory here advanced is founded,—such a measure would be prudent, both with respect to our ability to give an accurate exposition of his opinions in a concise form, and to the critical judgment we may be disposed to pass on them. But, the highly interesting nature of the facts here related, and the new views the author discloses of a series of objects previously but little attended to, or very inaccurately discerned, have appeared, on further reflection, to claim our immediate attention.

We shall endeavour to overcome the difficulties arising from the causes to which we have alluded, and give the reader a clear idea of the grand traits of this work, rather than a minute and regularly-progressive analysis of each particular part.

As the disease which seems to have led the author into the train of researches here disclosed, has not been much attended to by the generality of pathologists, we shall first adduce some

observations and corollary remarks, that will serve, in some degree, to enlighten the way before us.

A tuberculated state of the serous membranes of the abdominal cavity, is an affection of such frequent occurrence, that it must have been witnessed by every pathological anatomist of at all extensive observation; but, from this disease not being accompanied by any strongly-marked symptoms in its first stage, it has not then engaged much of their attention; and, in its more advanced state, its origin has probably been too commonly confounded with its consequences. Many authors have given more or less comprehensive histories of it; but, to avoid a multitude of useless references, we shall confine our attention to the remarks of an accurate observer, of sound and cautious judgment; the luminary of modern physiology; and an excellent pathologist, of extensive observation, especially in diseases attended with organic lesion:—Dr. PEMBERTON, BICHAT, and M. BROUSSAIS.

This malady is well described by Dr. Pemberton, in his treatise on Diseases of the Abdominal Viscera, under the head of Chronic Inflammation of the Peritoneum: for this he considered to be its origin. We may therefore save much time and space, by referring the reader to that classical medical work, for its history, symptoms, and the more general characters of the morbid appearances after death.

The observations of Bichât chiefly relate to its earlier stage: he first speaks of it as "chronic inflammation, with the production of a multitude of little whitish tubercles;" but, in this case, as in almost every other, Bichât advanced nothing positively of the truth of which he was not well assured, and which subsequent observation has not tended to confirm: he therefore, in the ensuing page, corrects the above opinion respecting its origin, by saying, on comparing the serous and cellular membranes, "there is a disease of the serous surfaces which we do not see in the cellular system: it is that slow inflammation of which I have just spoken,—a disease which we should rather arrange in some other class than that of the phlegmasiæ, and which is especially characterized by the production of the little tubercles which accompany it. Those authors who have not paid sufficient attention to this malady have denominated it chronic enteritis in the peritoneum, latent inflammation in the pleura, &c. It does not affect the subjacent organs except in the latter stages, when it is propagated by the medium of the cellular tissue; it has its seat exclusively in the serous membranes; and may be an affection peculiar to those parts, just as miliary eruptions are to the cutaneous, and aphthæ to the mucous, surfaces."*

* *Anatomie générale. Système Sereux.* Art. ii. § i.

M. Broussais has particularly described two cases of this disease in its last stage:* he notices it also, in a general manner,† in its primitive character. He considers it to depend on chronic inflammation affecting the *white capillary vessels*, and that this is not seated in the serous membranes themselves, but in the subjacent cellular membrane. Inflammation and thickening of the former texture, he considers to be an accident; and its elevation into tubercles of the form of hydatids, as a consequence of the effusion beneath them;‡ and the matter thus formed he has found to vary in consistence, from difference in the character of the diseased action, from a limpid fluid to a substance of cartilaginous hardness.

We marked out in a particular manner, the expression, *inflammation of the white capillary vessels*, in the above paragraph, because this relates to a very important part of the doctrine of M. Broussais. We cannot here enter into a detailed exposition of it; it must suffice for us to say, that, with Bichât, and many other eminent modern pathologists, he considers inflammation to vary from irritation only in degree, with regard to its nature; but that an important distinction respecting it is, whether it has its seat expressly in the sanguineous vessels, or in those which ordinarily, and even when inflamed, do not admit red blood except in a very partial manner; or whether it affects both those systems of vessels. It is inflammation of the white capillaries, or lymphatic vessels, that gives rise to tumors in general. This notion may appear merely hypothetical, when contemplated without any observations for its support; but it is rendered very plausible by the author's arguments.

The application of the above citations will be discerned as we proceed; and now we will commence our analysis of the work of Dr. Baron.

The author's history of the disease under immediate consideration may be passed over without inconvenience, by referring to the description given of it by Dr. Pemberton, excepting those observations which are peculiar to himself, or which bear a particular relation to his views respecting its nature and origin. The principal of those are, the distinctness of the tubercles from the organic lesions dependant on inflammation, which, as the author expressly says in one case, were "distinct in all their characters from the tuberculous disease, and manifestly had been formed at a much later period." Some of the tubercles he observed to be circular and pendulous, varying in

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* *Histoire des Phlegmasies Chroniques*, tom. ii. Obs. 56 et 57.

† *Examen*, &c. p. 305.

‡ This notion, we may remark, accords with that adopted by Prof. Mangili to explain the origin of the cysts, ordinarily termed hydatids, formed in the uterus. See the Sketch of the History of Medicine, in the forty-first volume of this Journal.

size from a pin's-head to that of a Spanish hazle-nut; some contained a soft, curdy, yellowish, matter; others were of a cartilaginous hardness and texture; and many were filled with a more or less limpid and colourless fluid; and some, by coalition, had formed tumors presenting great varieties of character. Similar appearances were frequently found in the peritoneum, lungs, pleura, and pericardium, of the same subject. Of the symptoms of the disease during life, we shall only notice a remarkable want of the nutrition of the body in every instance; the occurrence of a swelling of the lower extremities, often confined to one side, during the course of the disease, in several cases; extreme uneasiness in the stomach and bowels after taking food, or the ejectment of it by vomiting; and a sense of great weight in the intestines, which one patient compared to bullets appended to every convolution of them. Let us then, by way of summary, again observe, that the distinctness of the tubercles from the inflammatory affection; their hydatidical character; the signs of their progressive changes into tumors more or less dense, and even of a cartilaginous texture; and the existence of similar morbid appearances in parts of different species of structure; were the principal circumstances that led Dr. Baron to form his peculiar opinions respecting the nature of this particular affection; and subsequently, by the extensive and novel views his progressive researches continued to disclose, to a new theory of the origin of the greater part of the tumors witnessed in the human body. Let us now examine his particular opinions, and his arguments in favour of the theory to which we have alluded.

After some general objections to the too comprehensive manner in which inflammatory action has been brought forward in explanation of the origin of organic lesion, by the greater number of modern pathologists, Dr. Baron adduces Dr. Carmichael Smith's description of the symptoms characteristic of inflammation of diaphanous membranes, as "very accurate;" and he also remarks, that he was "induced to quote from the writer in question, because he was the first to introduce scientific and precise views into enquiries of this kind." On this point we must express an absolute dissent from the opinions of the author: we consider that description, as relates to inflammation of diaphanous membranes generally, to be vague in most respects, and erroneous in many important circumstances. Dr. Smith says, "we are certain that it (inflammation of diaphanous membranes) is attended with great pain, and with a high fever:" and the account he gives of its terminations, applies, as well as the above remark respecting its symptoms, solely to the more acute and intense forms of inflammation.

As Dr. Baron decidedly opposes the generally-received

opinions respecting inflammation, or rather neglects even to notice that form of it commonly termed *chronic*, it is much to be regretted that he has not given, precisely, his own description of the symptoms that we may be allowed to consider designative of the presence of that species of morbid action. In identifying his opinions with those contained in the paragraph he has cited from Dr. Smith, he will, we believe, have to encounter the objections of by far the greater proportion of the best pathologists; for Dr. Parry's opinions respecting the forms of disease constituting the different varieties of inflammatory action, are now almost generally admitted. The author, on the contrary, assumes the proposition to which we have alluded, as a basis for his arguments against the opinions generally entertained respecting the inflammatory nature of this tuberculous disease of the serous membranes: "it exists (he says) without acute pain and high fever; and the appearances observable on dissection, do not accord with those which all the most *accurate* anatomists enumerate as consequences of inflammation."

We cannot designate the anatomists to whom the author alludes, because he has not given a reference to any of them, excepting Dr. Smith and Bichât, whose opinions on this subject we have already adduced. The most forcible objections Dr. Baron has produced against the inflammatory origin of the disease under consideration, are certainly his own observations made on dissection of the victims of that malady. It does from them appear, that the tuberculous affection did arise, in some cases, from a variety of morbid action differing from that of inflammation; unless we suppose inflammation had existed, and that all the other signs of it had disappeared before death. But here we advert to suppositions that would be unwarrantable, had not the most accurate and experienced observers described a similar disease, which they consider to have essentially originated in chronic inflammation; since it appeared to come on suddenly, from evident causes, in persons previously in good health, in whom no organic lesion could be suspected to exist, and it was attended from the onset with evident signs of inflammatory action. Dr. Baron, however, says, "Although pain, acute or otherwise, had been felt at some period of the disease by all the patients, it does not in any of them appear to have been such as results from any well-ascertained inflammatory affection; and we have just given proofs that the change of structure, both in the peritoneum and the mesentery, had proceeded to a great extent before inflammation came on. I think, too, we have the same thing demonstrated by the occurrence of effusion, in three of the cases, subsequent to the existence of all the early symptoms of the disease."

The objections that may be made to this statement by the

partizans of the opposite doctrine, are, that the tubercles were the results of *chronic* inflammation, (the symptoms of which are often very obscure, and which is frequently not attended with much pain,) that may have persisted or subsided after these tubercles were produced; whilst the subsequent inflammation, to which Dr. Baron alludes, was an accident, similar to what occurs, sooner or later, in all cases of morbid change of structure of the soft parts. It is worthy of remark, too, in connexion with the opinions of M. Broussais, which we have already noticed, and with those of HALLER respecting the origin of cystoid tumors in general, which we shall presently refer to, that inflammation of the cellular tissue is not attended with much pain, nor with constitutional disturbance, unless the inflammation be intense in degree, or seated in parts of a dense and unyielding structure,—as in those confined by a strong fascia, &c.: and thus we commonly find the pain and general disturbance of the system subside immediately after the division of the fascia of the hand and fingers, and of other parts, by the scalpel, in cases of inflammation affecting the cellular texture beneath those membranes.

We shall transcribe one of the cases which Dr. Baron states to be particularly adapted to illustrate his opinions of the origin and nature of the disease under consideration. This assertion, and its conciseness, have led us to select it from the many related in this work.

"Priscilla Bullock, æt. 17, Feb. 5, 1818. Complains of pain and tenderness of the belly, with frequent cough, and quick and laborious respiration. The appetite is very bad, and what food is taken is speedily rejected, after violent retching. The bowels are loose, and she has a general sense of uneasiness about them. Pulse 130. The skin is hot, and for the most part parched; except at night, when she has cold sweats. The tongue has a bright red colour. The lips are dry, and the cuticle is frequently peeling off. She complains also of pain about the shoulders and chest.

"This girl's symptoms are reported to have come on about ten weeks ago, after being exposed to cold and rain. The looseness began at that time, and it has continued ever since. About a fortnight ago she was attacked with measles. To that attack she ascribes her cough and the uneasiness about the chest.

"I pronounced this to be an affection of the peritonæum, and probably also of the lungs and pleura, like those of Tandy and Aldridge. A complete removal of some of the most distressing and characteristic symptoms, led me at one time to doubt the accuracy of my diagnosis. She was repeatedly blistered; and the irritable state of the stomach and bowels was so effectually obviated by chalk, and catechu and opium, that both the vomiting and looseness left her about a fortnight after she came to the Infirmary. The velocity of the pulse, too, was very much diminished; and so were the cough and difficulty of breath.

ing. The appetite improved, and she certainly gained flesh. This circumstance convinced me, that, though the peritonæum might be affected, the mesentery could not have suffered so much as in the other cases.

"She continued improving till the 1st of April. Then came on more cough, with heat of skin, and a quick pulse and pain about the chest and belly; but it was especially severe in the temples and the forehead. She was bled by leeches on the head, and purged. She nevertheless fell into a state of stupor; the pupils of the eyes became dilated, and a rigid and spasmodic action of many of the muscles took place. During this state, the disorder, both of the thoracic and abdominal viscera, seemed to give her no uneasiness. She was bled at the arm; the head was shaved, and both temporal arteries were opened; and purgatives and blisters were used: but all did no good. She died on the 7th.

"I next day examined the body. The abdomen felt hard and tense, but it was not protuberant. Its peritonæal lining was universally thickened and tuberculated. The tubercles were very numerous, many of them being circular and pendulous. They varied in size, from that of a pin's head to that of a Spanish hazel-nut. The latter contained a soft, curdy, yellowish, matter. Others were of a cartilaginous hardness and texture. On the surface of the intestines they were numerous, and small, and distinct."

In his reflections on this case, Dr. Baron observes,

"The case of Bullock affords the only example I have ever seen, of a complete interruption to the progress of the disease, after its peculiar characters were apparent. The account of the dissection, in some measure, explains this circumstance. The mesentery was not completely involved in the disease; and the adhesive inflammation seems to have come on subsequent to the existence of the tuberculous disease, and to have destroyed her before the other affection had run its usual course."

After a further development of the arguments we have already noticed, against the doctrine of the inflammatory origin of this disease, the author advances a proposition, respecting which the reader must suspend his judgment until he has become acquainted with the facts on which it is founded. It is by them rendered, at least, plausible; and the author states, that he has yet many others to produce in its favour. These we wait for with much anxiety; since there are some points in his theory that still require the support of facts to make it satisfactory. After noticing the opinions of Bichât on the tuberculous affection above described, he says,

"There is reason to believe that this writer has fallen likewise into error, in describing this disease as peculiar to serous membranes. Tubercles exist in almost every texture, and their origin and essential character will probably be found to be the same, wherever they are discovered."

We shall proceed to the author's application of this proposition, after we have adduced his opinions respecting the origin of the disease which has already engaged our attention. He says,

"We have not been able to show where this disease really originates, though it is perhaps now apparent where it does not. Nothing that is known, either of the physiology or pathology of the sanguiferous system, seems capable of explaining what we are now in quest of. We must therefore direct our attention to another part of our structure."

It is to the absorbent system to which the author adverts; though he has not in the present treatise advanced any thing positive, in the way of direct argument, on this subject. We shall, however, adduce what he has stated.

"This enquiry has hitherto been confined to the symptoms and consequences of tubercles in the peritonæum; but the dissections have proved the existence of the disease, not only in other membranes of the same class, but in other textures. They have been found in the lungs and in the pleura; and it will afterwards appear, that they may exist in almost every texture of the body. Their origin must therefore be connected with some one of those elementary parts of our frame, which are diffused through the body, and enter into the composition of every organ. This is the case with the sanguiferous, and so it is with the nervous and absorbent systems. Disorders of the latter are supposed to occasion many of the symptoms of a numerous and most unmanageable class of diseases. To this class may perhaps be referred the complaint under consideration; and we are now to see whether, by fact or analogy, we can trace the morbid appearances so far as to enable us to give a satisfactory account of their origin."

Passing over the question of the propriety of thus *searching* for principles to serve for the overthrow of an existing theory, and the establishment of a new one, we stop to point out an omission in the above enumeration of the different structures of the body, universally distributed, that a little surprises us,—we mean the *cellular tissue;* especially, too, when it was the opinion of HALLER, that cystoid tumors originate solely in this tissue; and those pathologists who agree with him, will not fail to bring forward in their support the very forcible arguments in favour of their opinion furnished by Bichât's treatise on the texture we have mentioned. It was this consideration which led us to refer to the observations of M. Broussais, at the commencement of this article, as illustrations of the opinions to which we have alluded.

Dr. Baron refers to the history of a case related by Sir EVERARD HOME,* which, he considers, supports his opinion. He,

* See page 28 of his treatise on Cancer.

indeed, says, "As far as one case goes, the evidence of what has been quoted is very conclusive; and, when it is examined in conjunction with the facts in another part of this enquiry, it affords, at least, fair reason for believing, that the opinion to which I incline is not destitute of foundation."

We do not regard this in so convincing a manner; but, as the settling of this point is not of essential importance in the author's theory of the origin of tumors in general, which is the most interesting part of this work, we shall pass over it, to the curious facts on which that theory is founded, and respecting which we have already bespoken the reader's attention. These are the various transformations of *hydatids*, using the author's appellation; from mere cysts containing a more or less limpid and colourless fluid, into tumors possessing different characters, especially as relates to their degrees of density, from a mellicerous consistence to cartilaginous hardness and texture. This, it should be remarked, had been previously stated, in a partial manner, as we shall hereafter more particularly show, as a matter of conjecture, rather than of precise observation. It was Dr. Jenner, the author says, who first pointed out this occurrence to him, and who has demonstrated the fact by experiments on rabbits and some other young animals.

"He found that, by feeding them with some kinds of food, the liver soon became studded with hydatids; and, by examinations at different times, he was able to trace the gradations already mentioned, from the first inspissation of their contents and thickening of their coats, to their final conversion into tubercles of varying size and hardness. In the same liver he has also repeatedly found every gradation, from compact caseous-looking matter, to the limpid contents in their first stage."

Some of the facts above alluded to were communicated to Dr. Beddoes, and were published by him in his work on Factitious Airs; but they have failed to engage the attention of pathologists in general.

Dr. Baron has witnessed similar instances of morbid transition in the human body; and, what is worthy of particular remark, cysts containing matter having diversities of character, were found to spring from one small root or pedicle hanging into the abdominal cavity like a bunch of grapes. Others exhibited a diversified series of concentric laminæ, like many urinary calculi.

The author also adduces some cases from De Haen* and Boerhaave,† and other authors, illustrating also this species

* *Ratio Medendi*, t. i. c. xx. part vii. c. xvi.; et *De Hydrophe Cystico et Hydatidibus.*

† *Epist. Anat. ad Fred. Ruysh*, p. 73 and 82; and his history *Atrocis Rarissimique Morbi.*

of transformation. He then recurs to arguments against the doctrine of the inflammatory origin of tubercles; and again advances, in general terms, his opinion that their formation may be more satisfactorily ascribed to the absorbent than to the sanguiferous system; and that *their essential character is probably the same, in whatever texture they are seated.*

We cannot ourselves form any plausible conception how a cluster of tubercles, hanging from a pedicle like a bunch of grapes, can originate from disease of the absorbent vessels. We will leave this subject to the reflection of our readers, and proceed to the author's application of the proposition last advanced, to the explanation of the origin of cancer, fungus hæmatodes, tuberculated sarcoma, and fatty tumors. He first examines, in a particular manner, the cases related by Sir EVERARD HOME* of the existence of hydatids in the breast with cancer; endeavouring, of course, to show, that the existence of hydatids should be considered as the origin of the disease, not as an accidental occurrence. This notion, it will be recollected, was some years since advanced by Dr. ADAMS, who, it appears, derived the ideas that led to it from the paper of Dr. JOHN HUNTER on Hydatids, as Dr. Baron points out. It should be remarked, that Dr. Baron did not become acquainted with this coincidence between his opinions and those of Dr. Adams on this subject, until the present volume had nearly passed the press; but he stops to adduce some remarks on the particular development of this doctrine, given by the last named physician. We are not disposed to advocate the notions of our late friend on this subject; but the regular examination of Dr. Baron's theory leads us to notice one of his objections to them, on which he seems to lay particular stress: this applies to the opinion attributing cancer to the *living state* of the hydatid, admitting that hydatids are animalcules: he has shown, he says, "that it is to the loss of the hydatidical character altogether, and the transformations of these bodies, that the morbid appearances in this, and in many other diseases, are to be referred." This distinction is not perfectly intelligible to us; and we wish the author had entered into an explanation of it, because it involves a point of much interest in his theory.

If hydatids are animalcules, and Dr. Baron is inclined to believe them such, we cannot suppose the changes described by him can take place in them after their death. How can a limpid fluid in a dead animal become changed into a substance of cartilaginous texture? If they are only a morbid formation of, or from, the part in which they are seated, what is the precise state, in their progress from a cyst containing a limpid fluid to a

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* See page 108 of his Treatise on Cancer.

pultaceous or cartilaginous mass, at which they may be considered to constitute cancer? This the author has not explained.

The author's arguments in favour of his doctrine of the hydatidical origin of the various species of tumors we have enumerated, will not, of course, admit of being at all represented in so concise an abstract as our limits confine us to: we can only say of them, that they are highly ingenious, and very plausible as relates to many points; but we are not at all inclined to give our assent to his theory generally. Yet it has hardly the air of due candour and liberality, to make such a remark without having given an exposition of the author's particular arguments, or of the reasons for our dissent. The latter would extend too far this article, for we have yet much to adduce by way of analysis of the work: we shall, then, choose a subject, on which we will give the whole of Dr. Baron's discussion on one case; and, with respect to the manner in which it favours his doctrine, as well as its adaptation to our limits by its conciseness, we perceive none of them more appropriate for transcription than that on a case of fungus hæmatodes, related by Mr. HEY.

"Among these diseases I have mentioned the fungus hæmatodes. This name, it has been justly remarked, is calculated to mislead. Mr. Hey, when he applied it to the formidable case of that description which came first under his observation, was guided by an appearance, which, perhaps, ought to be considered rather as an occasional than a constant symptom; a symptom which is only seen in parts previously diseased, whose morbid texture and condition have been altered by external violence or other causes.

"These things must be kept in remembrance, otherwise it may be supposed that I have been pursuing unfounded analogies, and incautiously drawing inferences from diseases which are at variance with the doctrines advanced. It is, comparatively speaking, of little consequence what name we assign to disorders, provided that name be well defined; and the reader will perceive that I have been much less anxious to establish uniformity on that point, than to gain a true knowledge of morbid appearances, without which all attempts at amending our nosology must be useless, if not pernicious.

"When, therefore, the disease in question gets into that state which accords with and justifies its name, the fungus is to be looked upon, not as a specific and essential symptom, but an accidental one, determinable altogether by something peculiar in the course of individual cases. Thus, if we trace their progress, we in general find tubercles or tumors, at first small and distinct, advancing with different degrees of acceleration, and communicating to the touch different sensations, according to the predominant character of their contents. These, and all other tumors, during their growth, must have a great effect upon the surrounding parts; and, while they are in a diseased state, should the skin give way, in consequence of external violence

or any other cause, we sometimes see those frightful, bloody, fungated sores, which first suggested the name of the disease.

"This progress will be best illustrated by attending to the course of the first case described by Mr. Hey. The disease commenced in the form of a small movable swelling on the inside of the right knee, not far from the patella. It does not appear to have been occasioned by external injury, but external injury much modified its subsequent nature. The man, half a year after its appearance, fell against a stone, and hurt his knee; then the tumor increased till it became the size of an egg. It remained in that state till two months before he was admitted into the Leeds Infirmary. He then fell from a piece of wood, and violently bent the diseased knee, but did not strike it against any thing. 'The tumor began immediately to enlarge; and, within a few hours, extended half way up his thigh, on the inner side of the limb. About a fortnight after this last accident, the skin burst at the lowest part of the tumor, and discharged some blood. A dark-coloured fungus, about the size of a pigeon's egg, appeared, and remained at this part. A few weeks after the appearance of this fungus, the skin burst in another part of the large tumor, and discharged some blood. From the fissure arose another fungus, which had increased, in the course of the last week, to the size of a small melon, and now measured eight inches over, between the opposite parts of its base. Blood frequently issued from the base of this fungus, chiefly when the man hung down his leg.'

"Now let us attend to the morbid appearances of this disease, before it has proceeded so far as in this case, or its nature been changed by violence or other means; and I think it will incontestibly appear, that the remains of the hydatidical character may be more distinctly traced in it than in almost any other affection.

"Mr. Hey's third case was a tumor in the mamma. 'It was perfectly distinct from the surrounding adipose membrane; having no other connexion with it than by that cellular substance which universally connects the contiguous parts of the body. When divided by the knife, it had the appearance of a diseased glandular substance, intermixed with small cavities containing a viscid or gelatinous serous fluid.'*

"The fourth case was of the same description. 'The tumor adhered in part to the mamma, and had the appearance, when divided, of a diseased glandular substance, interspersed with three or four cysts, containing a viscid serous fluid.'"†

The author has selected from the most esteemed writers, several histories of the different species or varieties of disease to which we have already alluded, and examined them, generally, in a more detailed and more minute manner. With respect, therefore, to his mode of pursuing this enquiry, there can be but one opinion, whatever degree of assent may be given to his theory.

* Vide *Hey's Surgery*, p. 267. † *Ibid.* p. 271.

The questions respecting the origin of hydatids; whether or not all the cystoid tubercles referred to in this enquiry have the same origin; and what is the nature and seat of the morbid action from which they originate; do not, it must be evident, affect that part of the author's theory under immediate consideration.

We have now given a view of the principal traits of this work; and it is such as will, we believe, convey to the reader of this abstract accurate and tolerably comprehensive ideas of them; that is, as far as relates to observations and theoretical conclusions: the particular reasonings of the author must, of course, be sought for in the original, as they cannot be comprised in the limits to which we are here confined.

On taking a revisal of our analysis, we have, however, discerned that one point, a glimpse of which was given on a former occasion, (page 407,) yet remains to be rendered more clear,—which is, the author's observations respecting the formation of tumors from tubercles.

By *tubercle*, Dr. Baron would signify "those disorganizations that are composed of one cyst, whatever may be its magnitude, or the nature of its contents;" and by *tumor*, "those morbid structures that appear to be composed of more than one tubercle." Their particular and general formation is then thus explained: "It is probable that all tubercles, wherever situated, and of whatever substance composed, were, at their commencement small vesicular bodies with fluid contents."

A single hydatid, then, when transformed, will give rise to one tubercle, which may be either pendulous from, or embedded in, a part; and several may be more or less closely dispersed on the texture from which they arise. Hydatids also sometimes grow in clusters, somewhat like bunches of grapes, and thus hang into the different cavities of the body. Sometimes small hydatids grow from the outer or inner surface of larger ones, or float within them. Hydatids thus pendulous from, or dispersed in, a part, will become tubercles, and increase in size or in number until they encounter each other; they will then coalesce, and thus form a tumor. As any particular group of hydatids may arise from parts of diversity of texture, as well as from diversity of morbid action, this group will present tubercles of various characters, some containing fluid, others solid matter, &c.; and this variety will be imparted to the tumor thence formed. Lastly, those tubercles which are constituted by hydatids arising from the internal or external surfaces of others, will present an appearance of concentric layers, similar to what is seen in many urinary calculi. Instances of all these varieties are given by Dr. Baron.

We should notice in a particular manner the author's application of his observations to vomica of the lungs. He con-

siders that the cases of this affection placed by SAUVAGES in his class *anhelationes*, but which CULLEN considered solely as the consequence of inflammation, arise from a cyst being formed in the organ, similar in nature to those above alluded to; and he adduces some cases in support of his opinions, where the patients certainly did not present well-marked symptoms of inflammation of the lungs until after the bursting of the vomica, or at least until a short time before this took place. Inflammation, Dr. Baron remarks, generally comes on after the discharge of the contents of the cyst, probably from the admission of air to its cavity, and then *real pus* will be expectorated, and hectic fever ensue.

We, on a former occasion, gave our reasons for passing over unnoticed the author's history, &c. of the tuberculous affection of the peritoneum: we should also apologize for not considering, in a particular manner, his observations on its treatment. The principal reason is, that we thought it best to devote the space we could assign to our review of this work, to the most interesting part of it; another is, that medical aid has not hitherto been of much evident utility. We may, therefore, confine ourselves on this subject to the following extract, and some detached observations.

"By keeping the alimentary canal in a healthy condition; by freeing the mouths of the lacteals from obstructions; by apportioning the diet, both in quantity and quality, to the wants and powers of the system; by avoiding every thing whereby these powers may be either too much excited or exhausted; by applying suitable means to subdue such local affections as may either have existed, or may arise, in the course of the complaint; by attending closely to the state of the skin; by promoting the healthy action of the extreme vessels; by bathing of various kinds, by frictions, and well-regulated and well-timed exercise; we may often witness the most gratifying results, in such persons as I have alluded to, (those in whom the functions of the digestive and nutritive systems are falling into disorder, which the author seems to consider as the general origin of the disease,) instead of being compelled to watch the progress of fatal disorganization, which probably would have arisen, had less rational and comprehensive views directed our practice."

Bleeding was occasionally useful, to relieve inflammation as it arose, or as it became more intense. Mercury was found to be hurtful rather than beneficial. Heat at the stomach was sometimes alleviated by the mineral acids, and gastrodynia by the oxide of bismuth. But the most interesting remarks on this subject, are those relating to the disappearance of morbid growths under the influence of nausea, caused by medicine, as emetic tartar, squills, digitalis, &c.: and, by a method proposed by Dr. Jenner, the notion of which he derived from

some observations on brute animals,—of using a highly nutritious diet, after having maintained sickness by medicines for a considerable period. Dr. Jenner says, "Rabbits taken in a state of health, and put upon innutritious diet, soon began to be diseased, and hydatids sprung up upon the surface of the liver. These were thrown off, even when advanced to the incipient stages of tubercles, by restoring the animals to health by means of plenty of the most invigorating food."

Since we have, as we proceeded, in the foregoing analysis, expressed our dissent from all those propositions advanced by the author that we think to be disputable; and, on the contrary, stated positively those which appear to be well determined; it is not necessary for us to give a summary of our opinions respecting the points that seem to be established in this work: only this should be borne in mind by the reader of this abstract, that, much that here appears objectionable, may be so only from his not being acquainted with the whole of the facts on which the author's theory has been founded, and from the want of the greater part of his arguments in its support. On the other hand, a single perusal of the work itself, will, perhaps, lead to opposite sentiments: such, at least, was the case with us. The novelty and interest of the facts, the methodic manner in which they are arranged, and the boldness and rapidity of the reasoning on them, more than once induced us to join the author in positions which we have since been led to desert,—whether by a want of proper firmness of mind, or a severe mode of reasoning, is not for us to determine. These remarks will, however, serve as an apology for any unusual caution that may appear in this examination. An excellent critic, in his *beau ideal* of a Journalist, said, "*plus la matière sera importante, plus il se montrera difficile;*" and it was precisely this sentiment of DIDEROT that here influenced our conduct. We, then, conclude with earnestly recommending this addition to the science of pathology to the assiduous attention of our readers; and with stating that, when we are in possession of the whole of the author's observations and reflections, we shall assume either a more determined tone of assent to, or of dissent from, the new theory he has here advanced.

CRITICAL ANALYSIS

OF

RECENT PUBLICATIONS, IN THE DIFFERENT BRANCHES OF MEDICINE AND SURGERY;

SELECT MEMOIRS, AND HISTORIES OF CASES;

In the Literature of Foreign Nations.

Παlρίδες ἄρα
Ανδράσιν, ὰ παlραῖς ἄνδρες, ἀγαλλόμεθα.

Hints of a new Idea of the Nature of the Cellular Tissue. By G. M. De Felici, M.D. Public Demonstrator and Conservator of the Collection in the Museum for Pathology and Comparative Anatomy, in the University of Padua. 8vo. Padua, 1817.*

ALTHOUGH, as we have already observed, it was our intention to give a generally comprehensive view of the pathological doctrine at present prevalent in Italy,† before we particularly noticed treatises on distinct subjects; yet we have been induced to deviate from that intention on the present occasion, from the observations contained in this little pamphlet being almost the only ones of importance relating to the structure of the elementary tissues, that have been advanced since the time of Bichat; and from the consideration that they may be useful to the reader in his reflections on the work of Dr. Baron. We shall present our readers with the substance of it, without adducing any particular observations of our own, excepting some references to authors who have treated on, or produced illustrations of, the same subject.

The cellular texture enters into the formation of every other part of the human body; and of many of them it constitutes the greater proportion of their structure. It was long since considered by some physiologists as a net-work of vessels, more or less pervious to the fluids; but this opinion has not been generally adopted. Haller regarded it in a different manner: he says, "*Vasa, quæ tunicas pingunt, accessio sunt cellulosæ telæ, neque constituunt naturam membranæ, sed membranæ per cellulosam telam innatæ superadduntur.— Cellulosa fabrica fibris fit laminisque solidis omnibus, neque cavis, neque vasculosis, etsi vasculis edcedentibus pingatur.*"‡ A similar notion was entertained respecting it by Bohn,§ Bordeu,|| and

* *Cenni di una Nuova Idea sulla Natura del Tessuto Cellulare.* Del D8ttore G. M. De Felici, Pubblica Rèpertitore è Custode de' Gabinetti Patologico e di Notomia Comparata, nella I. R. Universita di Pavia. 8vo. Pavia: Bizzoni, MDCCCXVII.

† We are waiting for some important works that have appeared since our observations were made and arranged; and this will occasion the postponement of our Essays on this subject to the ensuing volume of this Journal.

‡ *Primæ Lineæ Physiol.* c. i.

§ *De Continuationibus Membranorum.* Amstelodamiæ, 1763.

|| *Recherches sur le Tissu Muqueux, ou l'Organe Cellulaire.* Paris, 1767.

Bichat,* the principal of the original authors on this subject who have written since Haller. But Dr. Felici observes, the very accurate observations of some great anatomists seem to show the correctness of the first-mentioned opinion; and he adduces some peculiar to himself, that contribute to establish its propriety.

"Ruisch," the author says, "had already observed, that the interior parenchymatous structure of the spleen was nothing else than an aggregate of vessels; and he showed some specimens of that organ, injected according to his own mode, in which nothing could be seen but an admirable tissue of vessels, ramified in a prodigious manner; as Sabatier† has also stated. Heister injected, by the veins of the penis, the glans and corpora cavernosa, which were thus rendered in appearance a plexus of venous vessels.‡ Similar injections made by Prof. Rezia are preserved in the anatomical cabinet in the university of Padua. But the conclusion I shall hereafter advance, is also founded on some other observations made by Prof. Cav. Moreschi.

"The corpora cavernosa of the penis, from the most careful and repeated observations and injections made in the human subjects, and various animals, especially in the horse of Prof. Panizza, appear to be nothing more than a mass of vessels, forming layers, anastomosing with each other, and which give to those parts the spongy, alveolar, or cellular, appearance, those bodies present. The other cavernous structures, that of the clitoris as well as that of the papillæ of the breasts, are obviously of the same nature. The cavernous tissue which surrounds the vagina, *plexus vaginam pene totam ambiens*, is merely formed by a multitude of vessels, transmitted from the adjacent parts, communicating with each other by frequent and short anastomoses. The cavities seen within the texture of the uterus communicating together, which much resemble those of the spleen and the corpora cavernosa of the penis, and which are enlarged and distended during the time of menstruation and pregnancy, are also shown to be only vessels passing into that organ in a serpentine direction. The truth of these observations is clearly demonstrated by the beautiful preparations in the Anatomical Museum in our University."

May we not then consider, says Dr. Felici, that the cellular tissue is formed in the same manner as the spongy texture of the spleen, and the corpora cavernosa of the penis? Are not, making an abstraction with respect to size, the net-works, the cellules, and the alveoli, the same in one as in the other? And why should we then regard their formation in a different manner? And are there not many circumstances which show the correctness of the opinion above advanced?

"If we observe the back of the hand," the author continues, "we see a tissue constituted solely of an extremely fine vascular net-work. All the arteries which are distributed in the membranes have also the same reticular figure. '*Fines arteriarum*,' says Haller, '*cylindrici, aut cylindricis proximi, ramulos producunt in eadem longitudine crebriores, plerumque in rete dispositos, ut quilibet ramus minoribus*

* *Anatomie générale. Système Cellulaire.* Art. i. § 1.
† *Traité complet. d'Anatomie*, tome iii. *de la Rate.*
‡ *Compendium Anat.* tab. v. fig. 22, 25.

surculis cum utroque vicinorum anastomoses faciat. Ita in omnibus membranis reperitur.' And, speaking of the veins, he adds, '*Rami majores venarum magis reticulati sunt, ac frequentioribus anastomosibus, nec inter parva, sed inter maxima vasa, inter vicinas, dextras et sinistras, superiores et inferiores venas, ubique adparentibus coeunt.—In minoribus ramis, retibusque membranosis, viscerumque interiori fabrica arteriæ, venæque plerumque conjunctæ ambulaut. Minus fere flexuosæ sunt.**

Many beautiful and fine injected preparations in the Museum at the University at Padua, some visible to the naked eye, others only by the aid of the microscope, as well as others furnished by Professor Scarpa, show in the most evident manner the cellular tissue of the face, the palms of the hands, the soles of the feet, the villi of the intestines, &c. to be nothing else than a congeries of vessels. "How surprising are the injections with mercury of the lacteals of the small intestines of the turtle, in the specimen contained in our Museum. In this preparation, presented by Prof. Scarpa, the lacteal vessels are so numerous, that it might be said the intestines of this animal are merely a congeries of those vessels; the metal shining through every discernible point of their surface. These injections would frequently succeed if the necessity of injecting the lymphatics by the branches, leaving the trunks to avoid the opposition of the valves, did not present a forcible obstacle.

"The injections of Ruisch prove the same thing; and yet these injections, however happily they may have succeeded, never fill the whole of the most minute vessels."

The beautiful observations of Prof. Scarpa, too, on the nature and generation of the bones, prove that they are not formed by lamellæ, or fibres, as formerly believed, but by a reticulated, tomentous, cellular tissue :† these, with the injections of the bones in general made by the same physiologist,‡ seem to show that the basis of the osseous structure is nothing but an aggregate of vessels.

These notions respecting the formation of the cellular tissue are powerfully supported by the phenomena attending the formation of new parts in the healing of wounds, the union of fractures of the bones, the generation of false membranes and cysts, which are apparently wholly formed by fine vessels shooting into the effused lymph. These are circumstances that at least show the subject to be worthy of attention, in the manner the author has here pointed out. Dr. Felici considers that it is from an alteration in the state of these vessels, that thin, diaphanous, and pellucid, membranes become dense and opaque in inflammation. "Thus," he says, "the fine and transparent lamina of the conjunctiva, by dilatation, varicosity, elongation, and obstruction, of the veins, becomes thick and opaque, pulpy, flocculent, and of a reddish hue; so that, on a first view, it would appear that a new membrane was generated on the cornea."

Whenever the cornea is affected with cloudy specks, a congeries of

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* *Primæ Lineæ Physiologiæ*, c. ii. §§ 38, 48.

† *De Penitiori Ossium Structura Commentarius.* 4to. Lipsiæ, 1799.

‡ See *Index Rerum Musei Anatomici Ticinienis Antonii Scarpa.*

varicose venous vessels will be found on the white part of the eye, corresponding to those specks more elevated and convoluted than the other sanguineous vessels of the same order; and, if the cornea be clouded in more than one point of its circumference, there will be seen so many distinct plexuses of varicous venous vessels distributed on the eye, exactly corresponding with them. It appears, on a first view, that each of those venous congeries, so distinct from, and prominent above, all the rest, have forced a passage for the blood through the boundaries of the sclerotica to the cornea. "I have an eye preserved," says Prof. Scarpa, "taken from the body of a man affected with chronic varicose ophthalmia, accompanied with cloudiness of the cornea, who died of inflammation in the chest. Having injected the head by the arteries and by the veins, I found that the wax, with which the veins of the conjunctiva were well filled, had found a free passage, as well in the more elevated congeries of those veins, as in the more minute branches of the same congeries running in a serpentine direction on the surface of the cornea, in the precise spot where the cloudiness had existed; whilst, in all the rest of the circumference of the cornea, the injected wax was arrested by having found, in the confines of the cornea and the sclerotica, an insuperable obstacle. And it is wonderful to see in this eye, by the aid of the lens, the extremely fine net-work formed by the numerous venous branches in the limits between the cornea and the sclerotica, where they beautifully anastomise together in a thousand ways all around it, without any of them, excepting in the spot corresponding to the situation of the opacity of the cornea, passing the boundaries formed by strong adhesion, which the fine lamina of the conjunctiva there receives. The *pterygium* is originally produced by an increased dilatation of minute venous vessels passing over a particular part of the surface of the cornea; to this is then added a greater thickness than natural, and an opacity of the fine lamina of the conjunctiva which covers the cornea, on which those vessels are spread. The facility and promptness of the cure in these cases, by excision of the congeries of vessels on the conjunctiva, and a concentric incision at the margin of the cornea, by which this regains its original pellucidness in the short space of twenty hours, is a proof that this disease is kept up more by a varicose and elongated state of those vessels, still pervious, than by an effusion of serum or coagulable lymph in the delicate lamina of the conjunctiva which is spread over the external surface of the cornea."*

On this principle,—that is, from the generation of new vessels, or from the elongation of the extremities of those of the inflamed part,—the author observes, it is that the generation of new membranes in inflammation depends; and he refers to preparations in the Museum of the University of Padua, in which membranes of that kind, formed in peripneumonia, carditis, pericarditis, and abdominal inflammation, were filled with mercury by injection. Preparations illustrating this vascular union in the morbid adhesions occurring in inflammation,

* See the new edition of the *Saggio di Osservazioni e di Esperienze sulle Principali Malattie degli Occhi, di* ANTONIO SCARPA; capi 7, 8, 11.

have been presented to it by Scarpa, Borda, and Joseph Frank. The following case contributes to the support of these opinions.

On dissecting a body, accompanied by Prof. Panizza, Dr. Felici says that he found a large, isolated, cystoid, tumor, in the left hemisphere of the brain, which contained about eight ounces of coagulable lymph mingled with pus of yellowish-green colour. The lateral ventricle, which was adjacent to it, was driven considerably out of its natural situation, in a downward and backward direction. The cyst which contained the fluid above mentioned, could not, apparently, have been formed by the membranes of the brain. On examining it particularly, Prof. Panizza found it to be composed of two laminæ, extremely vascular: the external one adhered to the cerebral mass by ramifications of vessels; the other presented a granulated appearance on its internal surface, was of a red colour, and looked indeed as if it had been injected.

"These facts (the author continues) will explain the nature of the tubercles found in the skin, which are merely a net-work of vessels, as is demonstrated by injections, with the exception of some nervous fibrili; which, though we cannot trace them, we know to exist from their effects.*

"We may thus explain the generation of new parts in wounds, by the elongation of the divided extremities of vessels into granulations, which restore the soft parts to their original form: the same means also produce the union of bones.

"We may thus explain the obstinacy of ophthalmia, the opacity and condensation of the conjunctiva in chronic varicose ophthalmia, in cloudy specks on the cornea, and in pterygium, by the excessive distension suffered by the vessels of the conjunctiva during the inflammatory state; by the varicosity and elongation of the vessels, principally the venous; and, consequently, by the condensation of the conjunctiva produced by the inflammatory action.

"We may thus explain the generation of new membranes, the morbid adhesions between them and other parts, and the origin of cystoid tumors within the substance of the brain.

"We may thus also account for the *vasa vasorum*, which enter into the formation of the cellular tissue of the vessels themselves, of which Haller observed, '*Arterias arteriæ habent in extremo imprimis celluloso textu, a vicinis undique arteriosis trunculis natas, multas, ramosas, reticulatas, omnes exiguas, in fetu etiam absque injectione plurimas.*'†

"The same facts will enable us also to comprehend more satisfactorily the sudden redness that tinges the face in the act of blushing, as well as the paleness of the skin and the cutis anserinis from terror, or from cold; by the influence of the nervous action on the contractile power of the arteries, and the varieties in the transmission of the blood by them which thence arise.

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* Caldani, *Institut. Physiol.* c. 16, §§ 224, 225, 227. Fattori, *Guida alla Studio dell' Anatomia Umana*, §§ 367, 368.

† *Prim. Lin. Phys.* c. ii. § 32.

"We may thus explain the growth, the preservation, and the death, of animals, according as these vessels are elongated, and give way to the impulse of the blood, or by degrees successively become closed and obliterated; and, lastly, according as their excitability shall become destroyed by the influence of stimulants.

"Lastly, we may thus more easily explain the secretions over the whole external and internal surfaces, and in the cavities of the body, and their re-absorption; and the readiness with which adipose matter is deposited, as Haller observed, '*Via ab arteriis ita proxima et libera est in cellulas adiposus, ut majuscula ostia eo hiare necesse sit, quæ dimittant mercurium, aerem, aquam, gelatinam, oleum, semper etiam in vivo animale pigrum. Non per longos aliquos propriæ fabricæ ductus excernitur, sed per totam arteriæ longitu dinem undique exsudat, ut nulla pars circumpositæ cellulosæ telæ absque madore sit, quando arteria aqua repletur. Adeps calidus in arterias pulsus easdem vias facillime legit. Celeriter congeritur, argumento cito renascentis post acutos morbos obesitatis.*'*

"Considering, then," the author concludes, "the whole of this extensive tissue, not as a texture of no importance, except as a basis for sustaining the figure and firmness of the body, but as an aggregate of vessels, the immediate organ of the secretions, of nutrition, of absorption, &c.; and viewing it entering into the formation of, and furnishing life to, every part of the system; we shall form a more noble, and probably more correct, idea of its uses in the animal economy."

These notions, Dr. Felici is careful to observe, are not advanced in a confident manner, but with the intention of exciting the attention of anatomists to some new researches on the subject. The observations he has adduced, seem to be sufficiently precise and important to lead to such an investigation; and the views they disclose of the structure of the body generally, certainly must facilitate our reasonings on what we witness of its functions.

Discourses on the Elements of Therapeutics and Materia Medica. By Nicholas Chapman, M.D. Professor of the Institutes and Practice of Physic and Clinical Practice in the University of Pennsylvania, &c. 2 vols. 8vo. 1817 and 1819.

[*Continued from p.* 166.]

IT will not be necessary for us to extend our observations on the question of the absorption of medicinal substances from the skin and the intestinal canal, in order to show that this is effected more commonly than Dr. Chapman has supposed. It may be proper, however, to remark, that, in our arguments against his doctrine, we employed only those facts that had been known and published before the period when these discourses were composed: the discoveries that have since then been made respecting absorption by the venous system, will probably be alone sufficient to lead Dr. Chapman to alter his opinion on this subject. The question, however, how far the effects

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* *Prim. Lineæ Phys.* c. i. § 19.

ordinarily witnessed from certain medicines depend on their diffusion through the system, or on sympathetic connexion, remains open for investigation; but many new researches are requisite to furnish the means for satisfactory conclusions. We now commence with the discourse on *the classification of the materia medica;* but a desire to pass on to that part of the work devoted to practical illustrations, will render our remarks on this subject but very concise: we shall confine them to a few general reflections, chiefly relating to the classification adopted by the author.

Dr. Chapman very properly separates the consideration of articles of diet from that of medicines; not that the qualities of the former are unworthy the attention of the physician, but because they should form a distinct subject for investigation.

After some remarks on the difficulties attendant on a classification of the materia medica, from the same article being expressly emetic, cathartic, diaphoretic, &c. under different circumstances, he notices the errors of that of Cullen; which is, indeed, quite inconsistent with his own doctrine of *solidism.*

Dr. Chapman then exposes that which he has himself adopted, which, as he acknowledged in his Preface, is not free from important errors, and is by no means the best that could be formed in the present state of medical knowledge. He, in the first instance, states that every medical substance is more or less stimulant to the animal economy. This proposition must be admitted, generally considered; but it is not a good foundation for the classification of them which Dr. Chapman has adopted,—that is, into *general* and *diffusible* stimulants. A few observations will render this evident. Wine applied to the stomach under certain states of disease, and even of relative health, will lower the temperature of the skin and render it pallid: here, then, it acts locally as a stimulant, but remotely as a sedative; a phenomenon arising from sympathetic connexion and concentration of the vital powers. On the other hand, cold air applied to the skin will, on some occasions, increase the powers and actions of the stomach, while it renders the skin pallid, from the causes already mentioned. A blister, too, is frequently the most powerful sedative that can be employed, from its withdrawing the vital actions from a remote part by the local irritation it produces. And, finally, certain substances applied to the stomach will increase the actions of remote parts in one state of the body, and depress them in another; phenomena depending chiefly on the greater or less plethoric state of the system, and the different degrees of vitality with which it is, under various circumstances, endowed.

There is another objection to this method, that has not escaped the penetration of Dr. Chapman; which is, that even the local agency of certain medicinal substances that is stimulant in the state of health, will be, apparently, relatively sedative in certain states of disease. He observes, "as whatever produces any positive impression on the living system, must do it by an irritant power, there can be no doubt that, in a very strict sense, every medicinal substance is a stimulant. But the effect thus created may be inferior to the natural degree of excitement, and much less than that of disease. When this happens, as les-

sening action, the article may with propriety be denominated, and in a practical view considered, sedative, in contradistinction to our more energetic remedies."

Their mode of agency may be thus regarded: the substances in question, by producing the actions dependant on their own specific influence, supersede the morbid actions, or the actions to which every part is excited by the influence of the rest of the economy.

This principle is practically applied to a great extent by many of the most eminent Italian physicians of the present day; and they administer tartar emetic, several other of the metallic salts, opium, &c. to parts suffering morbid action, even of an inflammatory kind, from the views thence derived.

Reasoning on it is not very satisfactory, but actual observation seems to show its truth. The eye, under certain forms of inflammation, will furnish a ready means for the illustration of this subject. This doctrine of *counter-stimulation* was first advanced by Rasori, on renouncing *Brownism*. Considering inflammation as the sign of increased action, and yet being obliged to acknowledge that topical stimulants sometimes remove it, it became necessary to resort to the reasoning we have above alluded to.

According to the present state of our knowledge, the most correct and useful classification of the materia medica must be that proposed by Bichat; which Dr. Chapman acknowledges by saying, "I am now persuaded that a much more natural, as well as useful, arrangement of medicines might be made, on the principle of their affinities to the several systems of the body; and, should an opportunity be ever afforded me, it is the one which I shall attempt to establish."

M. Alibert, whose fame is secured by the records of so many branches of medical science, has done much for the development of those views; but it will require the labours of successive generations to render them complete.

Dr. Chapman has in some degree modified his plan on those principles; for, though he divides medicinal substances into the two classes of *local* and *diffusible* stimulants, he treats of those coming under the former according to their influence on particular functions,—as emetics, cathartics, diuretics, lithontriptics, diaphoretics, expectorants, emenagogues, anthelminthics, and epispastics. In a perfect system of this kind, it would be necessary to comprise the particular influence of medicines on the elementary textures of the body; for it seems evident that certain ones affect particularly the serous, others the mucous membranes, &c. The second class of Dr. Chapman includes tonics and astringents. We shall first enter into the consideration of the former.

Previously to his observations on the use of *emetics*, the author adduces some remarks on the act of vomiting, and on the way in which this is excited by certain substances. Physiologists now seem to agree in the opinion, that, concurrent actions of the stomach itself, the diaphragm, and some of the abdominal muscles, ordinarily take place in this act. Perhaps the difficulties the author notices in accounting for

the agency of emetics, may be obviated by referring this to that law of the animal economy, by which every organ enters into a sort of action calculated to remove what is injurious to it; and, by motions tending towards the surfaces of the body, rather than such as may transmit them further into the system, when the matter is of a noxious quality. Thus, we find that substances irritating to the stomach, and not fit for the exercise of its digestive functions, are ejected from it by vomiting, if deleterious to the general economy, and transmitted to the bowels, if not so; whilst alimentary matter is pertinaciously retained until it is properly elaborated. These seem to be general laws, although they are often apparently diverged from; probably, in consequence of the common outrages committed against nature by civilized man in respect to his food.*

Emetics, Dr. Chapman observes, influence the system in various ways besides that depending on the mere removal of the contents of the stomach. They incite the liver and gall-bladder, secretion and evacuation of bile, and probably the pancreas, in a similar manner. From the sympathy of the stomach with the rest of the system, various morbid actions are averted by the powerful action and subsequent repose of this organ. The skin is peculiarly affected on this occasion, and is generally incited to increased secretion of a salutary tendency. The pulmonary organs are also called into action in a similar manner. The powerful effects of emetics in promoting absorption have been long observed, although not satisfactorily explained. The rational doubts that have lately been advanced respecting the influence of the lymphatic vessels on these occasions, especially as relates to the removing of collections of purulent matter, &c. must turn our attention to what seems to be the true means, but of which we have not yet sufficient knowledge to enable us to form any conclusions.

"In fever," Dr. Chapman says, "when the attack is exceedingly vehement, whatever may be the type, we should never fail to resort to an emetic, and even to repeat it, if a very successful impression be not made on the case by the first exhibition. This precept, however," he adds, "is more applicable to the bilious fevers of our own climate, and especially as they occur in the southern States, where they prove exceedingly intractable under any other mode of treatment." This observation is particularly interesting, as coming from a physician who considers that fever, "whatever may be the cause, is always a disease of sympathy, having the primary link of its ultimately lengthened and complex chain in the stomach. It is upon this organ that contagion, marsh effluvia, and other noxious matters, act; and hence, precisely as in the cases of poison, a local irritation at first occurs, which, if not at once arrested, spreads itself by multiplying the trains of morbid association, till the disease becomes general, involving more or less every part of the animal economy." Those who have adopted the doctrine of the gastric origin of several species of fever, have in

* See the fortieth volume of this Journal, pages 531, 534, 535, 536, for some interesting illustrations of this subject.

general been much afraid of the use of emetics, considering that they are hazardous remedies at any stage of the disease of the species alluded to; and Dr. Chapman, indeed, very strongly urges the importance of restricting the administration of them in what are called *malignant fevers,* to "the forming state:" it is in this way only, he says, that they are admissible. "Exhibited in the more advanced stage of the case, or after the disease is absolutely confirmed and pervades the system, they not only prove wholly incompetent to its removal, but generally heighten the worst symptoms, and augment the difficulty of cure. This effect was most remarkably exemplified in the treatment of our yellow-fever, and has been remarked in some other epidemics,—as the plague, &c." Whilst we state our dissent from the author's universal* application of a correct and important view of the origin of fever, as regards the seat of the "primary link of the morbid chain," we must express our conviction of the truth and value of his remarks respecting the use of the remedy under consideration. We believe it is solely from its having been employed after real inflammation of the gastric passage has come on, that it has fallen into its present disrepute. Reasoning, as well as experience, leads us to conclude, that an emetic will very frequently subvert the morbid action before it has acquired this degree of intensity; but, after this is established, emetics are commonly injurious: this distinction should have been more clearly made.

In puerperal fever, Dr. Chapman has prescribed emetics with advantage, "not so much to meet the general indications of the disease, as to relieve one most distressing symptom. The stomach is here not unfrequently loaded with a dark offensive matter, resembling the black vomit of our pestilential fevers, which occasions great distress and sickness, and, if allowed to remain, uniformly keeps up fever, and depresses the system into a typhoid state. To evacuate this noxious matter, an emetic is indispensable; and its operation, in some instances, will be followed by effects the most prompt and satisfactory." His opinion respecting the nature of this disease, is, that it has its origin in a primary irritation of the uterus; and that the peritoneum, in the more violent cases, takes on inflammation from sympathy.

The difference between the state of the uterus resulting from the nervous irritation causing this malady and real inflammation, is well pointed out by the judicious and experienced Giannini; and his views of this subject have led him to adopt a mode of practice that appears to have been extraordinarily successful. The remedy on which he has placed most reliance, is the cold, or the *semi-tepid,* bath, according to the state of the patient, the season of the year, and the stage of the disease. His expression relative to its utility is very strong: he says, "when the disease is treated by cold immersion, all other remedies may be dispensed with as useless, in the greater number

* From other parts of this work, we are led to suppose this to be an inadvertent expression; and that the author means only to apply it to what are called malignant fevers, with the consideration of which the paragraph in which this expression occurs commences. Dr. Chapman's remarks on the nature of Puerperal Fever seem to prove this.

of cases." The auxiliaries he resorted to were slight tonics, laxatives, and opium.*

Emetics have not preserved the repute they once acquired in the cure of hæmorrhage from the lungs; and Dr. Chapman joins in the opinion that their use on those occasions is hazardous: though, he says, the worst case of this kind he ever witnessed was completely suspended by a dose of digitalis that produced violent vomiting. In the more slight and chronic forms of this affection, they may be exhibited with safety, and are often very beneficial.

Dr. Chapman makes a distinction between menorrhagia and menstruation, however profuse: in the former, he considers the discharge to be really blood; whilst that occurring in the latter, is the result of a secretory action of the uterus. He has never employed emetics in uterine hæmorrhages, but very frequently nauseating doses of the medicine, and with a complete confirmation, in his mind, of what had been previously said respecting the efficacy of this measure. Dr. Chapman refers particularly to the statement of BERGIUS, and ALTHOF of Upsal; and states that he has witnessed several cases, where, "the moment the nausea was induced, the flooding ceased." He prefers ipecacuanha for this purpose, and frequently combined it with opium, in the quantity of two grains of the former with half a grain of the latter, giving this dose every two or three hours. The same medicine was employed in dysentery with equal benefit, confirming the statements of Cullen, Sir George Baker, Mr. Playfair, Mr. English, Mr. Hamilton of Ipswich, and Mr. Joseph Arnold.

In croup, the author thinks very highly of their use, more so than we believe is generally done. There is often great difficulty in exciting vomiting in severe and sudden attacks, especially when it is of a spasmodic, rather than an inflammatory nature. On this occasion, Dr. Chapman says, "My experience teaches me that nothing is so effectual as the warm bath; and, where it fails, venæsection, in extreme cases, even *ad deliquium animi.* Never have I witnessed one solitary instance in which these means combined did not succeed in awakening the susceptibility of the stomach to the action of the emetic, and effecting all which can be expected from the most free and copious vomiting."

In the malignant sore-throat, and in complaints of the chest in general, the author concurs in the common opinion in favour of their considerable utility.

In rheumatism, he has not had much experience of their use, excepting in that species "originating in districts exposed to marsh exhalation, and where the attack, as sometimes happens, is blended with intermittent or remittent fever. They here prove serviceable, on a principle perfectly intelligible." In dyspepsia, his "first step is generally to resort to this remedy." We have ourselves seen much

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* See *Della Natura delle Febbri, e del Miglior Metodo di Curarle,* &c. Del Dottore GUISEPPE GIANNINI, Medico nello Spedal Maggiore di Milano; tom. ii. p. 117. We shall take another opportunity of noticing this physician's observations and opinions on this and several other febrile diseases, in a more particular manner.

mischief produced by it, especially where the patients have been accustomed to too free a use of spirituous liquors and irritating food; and these are such common causes of dyspepsia, that we think some restriction is requisite in the use of emetics. The application of leeches and vesicatories to the epigastric region, and a very restricted diet, are, in by far the greater proportion of cases, more efficacious, as well as more safe, remedies than tonics.

In what are called nervous affections, the author considers this medicine as among the most important of our means in their management. He considers "that it is highly probable, that every one of the series has its origin very often in the alimentary canal, and sometimes in the stomach itself." M. Broussais, by his pathological researches before and after death, has left this no longer a matter of doubt.

"Of the class of neuroses," says Dr. Chapman, "the one which appears to me sometimes to be most unequivocally a gastric affection, is epilepsy. Entertaining this impression of the nature of the disease, I have freely prescribed emetics in it, and with manifest advantage. By exhibiting them just before the accession of the paroxysm, they will often prevent it; and even if they do not altogether resist it, they render it milder and of shorter duration. Nor is this all which they accomplish. By the strong and direct impression made on the stomach, the commencement in that organ of the wrong association constituting the disease, is broken; and afterwards the case yields to those remedies which we denominate tonics." This view of the subject will again be noticed when we arrive at the discourse on purgatives.

We pass over some less important observations on the use of emetics in apoplexy, palsy, and sick head-ach, to those relating to mania.

Dr. Chapman first notices the difficulty with which vomiting is here excited in many instances; and he remarks that its removal, as in croup, is a pretty certain sign of convalescence. The fact is, it is a sign that the balance of vital action is more accurately restored. To meet this indication by a succession of the most active and stimulating emetics, as the author advises, is, we think, a hazardous measure: those of the mineral species should, at least, not be chosen for the purpose; for, although the relations of the stomach to the brain, by means of which vomiting is excited, may be much disordered, what Bichât termed the *organic sensibility* of that organ may exist in its full force, and serious mischief will arise from this being put into action by strong stimulants, without our being advised of it by pain; and from the very same cause that vomiting is not excited. Of this we have witnessed several instances. The vegetable emetics should here be chosen if this remedy be thought advisable.

Of the efficacy of emetics in what the physicians of the United States termed *mania à temulentia*, of which we gave some remarkable instances a short time since in a memoir by Dr. Klapp, the author cannot speak from personal observations, "having always been so well satisfied with a different plan of managing the disease, which I shall hereafter mention, when I come to discuss the properties of opium, that I have not been induced to deviate from it in a single instance."

Hydrocephalus internus, Dr. Chapman says, he is convinced from attentive observation of its phenomena, as well as from the lights of dissection, does not, most commonly, depend on an accumulation of water in the ventricles of the brain, "but consists in an altered state of that organ, arising from a primary derangement in the chylopoietic viscera, and particularly of the stomach."

On this subject, as on almost every other, the author's opinions, when not original, are conformable to those of the best modern pathologists. We, however, regret that he has not oftener referred to their sources those whom he has borrowed; but this is an impropriety expressly dependant on the publishing these discourses in their original form of Lectures. We shall recur to this subject hereafter. The author seems to be more inclined to the use of emetics in this disease than Dr. Cheyne, and those who have adopted his opinions. One of his views in their use, is, however, peculiar to himself: he says, "I should administer them on a very different principle from that on which they have heretofore been supposed to operate. It would be to make an impression on the parts in which I presume the disease to be seated, and not to promote the absorption of effused fluids." They have not been commonly used for this purpose, but rather to remove offending matter from the stomach. Dr. Chapman's notion may furnish a useful indication in the early stages of the disease.

In the severe painful affections of the exterior integuments of the cranium, usually termed cephalalgia, Dr. Chapman has employed emetics with benefit. "Early adopting the notion that this complaint proceeds from a morbid condition of the stomach, the only two cases of it which have come under my care I managed by emetics, and had reason to be entirely pleased with the result. Even genuine tic douloureux, the neuralgia of some writers, has been cured, in several instances, by this same practice, and with such facility as to place it decidedly above all the modes of treating this most painful, and hitherto untractable, affection. The credit of employing emetics in this case seems due to Dr. Physick."

Richter, Dr. Chapman observes, maintained that many diseases of the eyes, especially amaurosis, proceed, more or less, from a disordered state of the chylopoietic viscera, chiefly the stomach. No one of the time had half his reputation in the management of that complaint, and, of course, not equal experience. His fame, indeed, was so diffused, owing to his unrivalled success, that persons afflicted with it resorted to him from all the countries of Europe. He deduced his practice directly from the theory of the disease which he had adopted. Considering it primarily a gastric affection, he directed the free exhibition of emetics, and afterwards a combination of tartarized antimony, with some other articles, to keep up a constant impression on the stomach.

The more attentively we examine the extant histories of this affection, the climates in which it is most prevalent, and the class of persons who are particularly subject to it, the more fully we shall be convinced of the correctness of those views.

In connexion with these observations respecting the origin of amau-

rosis, we should remark, that M. Demours, the most eminent oculist in France at this time, has witnessed some cases where it came on during the existence of diabetes, and, as he considers, from the same causes as those which produced the latter affection.

The following observations are particularly interesting. Dr. Chapman says, "Depraved vision I have several times seen from spasms of the stomach; and one case, perfectly well authenticated, is in my possession, where total blindness took place, and continued for many hours, in consequence of a severe attack of bilious colic, and which was ultimately removed by copious evacuations from the alimentary canal."

On the use of emetics in the different varieties of dropsy, the author's remarks are less important. He refers to Richter for a case of diabetes which succeeded to fever, that was cured by this remedy.

"Emetics have been prescribed in the bites of venomous animals, inducing constitutional affections. This was originally an Oriental practice; but I have understood that it is at present a good deal followed throughout our western country, where people are often bitten by the rattle-snake and other poisonous serpents. Of the utility of the remedy I cannot speak from my own knowledge; though, as in all cases of morbid poisons, the stomach is always very seriously, if not principally, affected, I am disposed to entertain very favourable impressions of the remedy."

Emetics are very frequently employed by the Chinese physicians, and we have somewhat to learn from them, we are inclined to think, respecting the attention to the state of the stomach in many diseases. This is a subject we shall formally enter into the consideration of at no very distant period.

With a reference to the opinions respecting the efficacy of emetics in strangulated hernia, and in favouring the reduction of dislocations, and the following remarks on their use in difficult parturition, "dependant on rigidity of the passages," as it is here expressed, the author concludes this discourse: "I have tried this means, and have seen the experiment made by others. The effect was, a very great degree of general relaxation and distress, without at all facilitating the dilatation of the parts, or in any manner promoting the labour; and hence the practice has been abandoned."

We have indulged in the foregoing extensive transcriptions from this part of the work, because the observations of the author are throughout judicious, and, when not original, so important, that they can hardly be too frequently impressed on the mind of the practitioner; and because the use of this remedy seems to have been much, and we think unjustly, neglected of late years on this side of the Atlantic. We earnestly advise, at least the younger part of our readers, to peruse attentively Dr. Chapman's remarks on this subject. Our limits will not permit us to extend our extracts respecting it much further: these must now be made from the discourse on the *particular emetics.*

Amongst the author's remarks on the particular application of different species of emetics to different cases, it may be useful to adduce

the following: When mere evacuation of the contents of the stomach is desired, ipecacuanha is the most appropriate, as it generally comes up with the first vomiting, leaving the stomach in a state of composure, if tepid fluids are not afterwards drunk; and, for this reason, it may also be given in a very large dose without inconvenience. Tartar emetic, on the contrary, generally produces repeated vomiting, and acts, moreover, on many other functions; and, for these reasons, is most applicable to cases where the production of the sympathetic effects of vomiting is also required.

We have, however, been taught to adopt greater reserve in the use of the latter in children, than Dr. Chapman inculcates, particularly in cases where vomiting is excited with difficulty; having seen very serious injury arise from a large quantity of the medicine being retained in the stomach. It is a convenient, but often a dangerous, emetic for exhibition to young children.

Cullen, who contributed so much to introduce the tartar emetic again into use, maintained, as Dr. Chapman observes, that it produces no advantage unless it vomits, or creates considerable nausea. Fordyce, however, remarked, that it was most efficacious in febrile disorders, when it produced the slightest gastric disorder; and in this opinion Dr. Chapman concurs; and he very judiciously remarks, that "medicines seem to do good in the cure of fever, by exciting their own specific or peculiar action; and, when they disorder the stomach by sickness, they depart from this, and, if they do not act as poisons, always become nugatory, or more or less mischievous." During the continuance of nausea, arterial action, muscular power, and animal temperature, are undoubtedly lowered; though, the moment it ceases, there is uniformly, at least in febrile affections, a re-action of the system, and a correspondent exacerbation of the disease.

We have abundant and forcible proofs of the great efficacy of tartar emetic in severe diseases, without any evident effect on the stomach being produced, in the useful observations of Dr. Balfour of Edinburgh, on this subject.*

Locatelli was accustomed to depend almost solely on the use of this medicine in the cases of typhous fever admitted into the hospital at Milan, and with the most favourable results. We have much to learn from the Italians respecting the use of this remedy in various inflammatory diseases, and in many of those vaguely termed *nervous*; but we shall shortly notice in a particular manner the works of Prof. Tommasini, and this will lead us to the consideration of this subject.

Sir George Baker and Sir John Pringle, the author remarks, preferred the use of antimony to ipecacuanha, in the treatment of dysentery; but he himself is disposed to prefer the latter. Of their use in diseases of the skin, he speaks in very favourable terms; agreeing, however, with Dr. Willan, that they must be employed for a considerable length of time to be productive of much permanent benefit.

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* *Observations, with Cases, illustrative of the Sedative and Febrifuge Powers of Emetic Tartar.* By Wm. Balfour, M.D. Edin. 1818; and London, by Longman and Co.

The use of tartar emetic to excite nausea in favouring the reduction of luxated joints, as proposed by Mr. WILMER, of Coventry,* is next adverted to; though, Dr. Chapman says, he prefers venesection, so as to induce syncope, for this purpose. It should not however be forgotten, that the faintness produced by tartar emetic is but of short duration, whilst that from copious blood-letting is often a thing of no small importance; and this should turn the balance in favour of the former in the greater number of cases.

The following paragraph contains some observations worthy of attention. Dr. Chapman says,

"As an enema, the tartar emetic has proved, in my hands, a most powerful and efficacious remedy, and one which promises hereafter to be of very diversified and extensive application. The first case in which I employed it, was to evacuate the stomach to remove poison which had been swallowed. After having unavailingly tried a series of the most active remedies, I directed that half a drachm of the tartarized antimony dissolved in a little water should be thrown up the rectum; and, as I anticipated, a violent cholera morbus ensued, evacuating the entire alimentary canal, so much so, indeed, that the food undigested came by stool. I have since this time had frequent occasion to resort to the same means, though not under similar circumstances. It has been chiefly in cases of very obstinately obstructed bowels that I have repeated my experiments, and generally with results highly satisfactory. My ordinary prescription for this purpose, is eight or ten grains of the medicine, which I have commonly found sufficient."

The author concludes this article with an account of the substances incompatible with this, in pharmaceutical combination, taken from ORFILA: these are the mineral acids, alkalies and their carbonates, earths, soaps, hydrosulphurets, and the astringent vegetable infusions.

The qualities of tobacco, squills, the preparations of copper, mercury, and zinc, are then passed in review by the author; but he does not here adduce any thing original of importance.

But we cannot follow the author, in the manner we have done in his remarks on emetics, throughout the whole of his work; we must content ourselves with adducing some detached observations, which will give the reader some idea of the nature and value of this system, and recal to his mind some useful observations. The next subject, that of *cathartics*, has received at least sufficient attention amongst us; we shall therefore only remark generally, that it is treated with much judgment by the author, and that his discourse on it is the result of much erudition and judicious reflection.

We think, however, that Dr. Chapman advises the use of cathartics in fever, as we remarked respecting emetics, in too general a manner: the only exception he makes is in yellow-fever, a disease he considers to have the character of a very malignant gastritis. There is nothing in pathology better ascertained than that gastritis is a very common cause of what is often termed idiopathic fever; and therefore, except

* See *London Medical and Physical Journal*, vol. xxiv.

in the very first onset of the disease, before the inflammation is established, reasoning would show us that cathartics are as injurious as experience has led Dr. Chapman to believe them to be in yellow-fever. This is too commonly proved by observation. Even at the present day we see purgatives given during inflammation of the mucous membranes of the intestinal canal, to carry off the disordered matter from the bowels; and the practitioner, seeing the quantity of mucus evacuated, felicitates himself on the success of his medicine; goes on inciting this secretion by his poisonous applications to the seat of the disease; and at length laments that malignant, *typhoid*, and putrid, symptoms came on in spite of them, and is surprised that the patient should die, notwithstanding the quantity of wine that he drank, and the bark that was *thrown into* the stomach. Were patients under such circumstances left to follow only the impulse of their instincts,—that is, to abstain from food, and drink cold water,—we should not often witness such results. Thanks to the lights of physiology and the evidence furnished by pathological anatomy, such scenes are now becoming rare.

The impropriety in the precepts to which we alluded, has only arisen from the author having been led, for the sake of conciseness, to speak in too general a manner; for hardly any thing in this work is conceded to blind authority, without reasoning on its propriety; and Dr. Chapman's pathology is not often contrary to that of the most distinguished physicians of the present period, nor his therapeutical measures contrary to the indications it furnishes.

[*To be continued.*]

Reflections on the Nature and Treatment of Cancer, supported by Practical Observations. By J. J. Lasserre, of Domme, Doctor in Medicine of the Faculty of Paris.*

This memoir contains some observations of remarkable interest to every medical practitioner, whatever general principles of pathology he may have adopted. Even those who consider that *cancer* is, in all cases, essentially a disease of a specific nature, or local morbid action modified by a peculiar diathesis of the system, will not think the cases here related unworthy of their serious attention. We shall therefore select two of these which are the most interesting, and such of the remarks of Dr. Lasserre as are expressly applicable to them; omitting his more general theoretical reflections, because we have already given our readers some ideas of them, on various occasions, in our extracts from the works of M. Broussais, of whose principles the author is a zealous partizan.

"A female peasant, of a dark complexion, robust habit, forty-seven years of age, married since her twenty-third year, and who had never been a mother, experienced, during eight months, great irregu-

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* *Réflexions sur la Nature et le Traitement du Cancer, avec des Observations à l'appui.* Par J. J. Lasserre, d.m.p. à Domme (Dordogne.) *Journal Universel des Sciences Medicales*, tome xiv.

larities in the periods of the occurrence of the menstrual evacuations, which were always accompanied, too, by violent colics and severe pains about the loins. In the course of the month of May, 1817, she perceived a movable tumor seated above the right nipple, about the size of a large plum. For twelve days she had suffered lancinating pains in the part, which induced her to come to consult me. This was in the ensuing June. The tumor was not painful to the touch; the nipple was redder and more sensible than that of the opposite side. I enquired whether she had ever experienced any external injury to the part, which might have given rise to it, and if she had adopted the bad habit of confining her person tightly by her dress? To these questions she replied in the negative.

"Reduced in this case to regard the affection as consequent on the derangement of the functions of the uterus, and as independant of local mechanic action, I proposed the extirpation of the tumor by the knife.*

"Forced to combat an affection which menaced a rapid progress, from the violence which the pains had acquired for several days past, and the rapid increase of the size of the tumor, I advised the repeated application of leeches to the part itself, and, intermediately, the plaster *de Vigo cum mercurio* mingled with that of cicuta;† an issue in the right arm; half a drachm of mercurial ointment to be rubbed on the same member; bleeding from the arm every eighth day; the use, after intervals of four days, of thirty grains of the pills of Bellost; a severely restricted diet, carried so far as to excite a sensation of *sharp* hunger; and cessation from the use of wine.

"On the 20th of July, thirty-six days from the commencement of the treatment, this woman again visited me. The tumor had diminished to about the size of a small nut; the pains were so slight as to be scarcely sensible; and the nipple was neither redder nor at all more sensible than that of the other side. Menstruation had been totally wanting. The treatment having succeeded beyond my expectations, I ordered its continuance, and added to it the use of whey containing the acetate of potash. Leeches were employed only twice in the ensuing month, as well as the bleedings from the arm.

"The 20th of August, no appearance of menstruation; there did not remain the slightest vestige of the tumor; the pains had ceased for three weeks. The only thing this woman now experienced from her disease, was the emaciation resulting from the forced abstinence, to which she had submitted with a degree of resignation truly exemplary. I have since then frequently seen her: she has regained her health and flesh, and her ordinary gaiety of disposition; not the slightest symptom of her disease has re-appeared. The breast in which the tumor was seated is, however, not so firm and plump as that of the other

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* Should we, in symptomatic cancer, have recourse to the operation in the first instance?—*Note of the Editor of the Journ. Univers. des Sciences Med.*

† "In employing this topic, I had no other object than that of alleviating the pain by means of the sympathy of the skin with the parts which it immediately covers."

side. This woman still preserves the issue open, and wears the plaster on the breast, which she renews every month.

"I should by no means say that I have, on this occasion, cured a cancer of the breast; I am too well convinced that the disease was not a cancerous affection: but I believe I may state that it is highly probable that I have prevented the development of a disease of this nature. Almost all cancers have not a different origin; they are developed under the influence of identical circumstances. If it be demanded of what nature was this woman's disease, I reply, that it was chronic inflammation depending on the influence of sympathy from the uterus; or, rather, from the cessation of the functions of that organ, and the transport to the breast of the sensibility which then abandoned it, perhaps too suddenly.——

—"What I have said respecting chronic engorgement of the glands of the breast, is applicable to disorganizative affections of the neck and body of the uterus. Let us reflect on the circumstances which evidently give rise to cancer of the uterus, and examine them in a physiological point of view, and then see if that malady is not obviously the consequence of prolonged irritation? I need only mention difficult labours, and a want of proper relation between the genital parts of the two sexes in the act of coition. Every physician knows that cancer of the uterus may occur as a consequence of these circumstances.

"This etiology is equally applicable to cancers of the stomach, the rectum, &c. In the greater number of these cases, we only find, if we trace the source of the evil, the slow progress of chronic inflammation, which leads to them as a result. Let it not be said that cancer is a malady *sui generis*, an *essential* malady, an *organic vice*. If all diseases had been regarded in this manner, medicine would have been always left in its infancy. The cultivation of pathological anatomy, the application of the laws of an enlightened physiology, the study of the language of the suffering organs, independantly of the names by which diseases have been designated: such are the only means of making discoveries in medicine really useful to the welfare of patients and to the progress of science. It is to M. Broussais that we owe the first clear exposition of these principles, and the demonstration of the superiority of them by their application to the healing art.

"One case only of chronic engorgement, or, to speak the ordinary language, one case only of schirrus of the uterus, has occurred to me in the course of my practice. Without saying any thing in prejudice of the propriety of the means I employed to combat it, I will here faithfully relate them.

"Mrs. T. forty-three years of age, of a dark complexion, prodigiously fat, and of an ardent disposition of mind, experienced for six months irregularities in menstruation. This lady was the mother of five children: the whole of her labours had been of the most easy and favourable description.

"In the course of the summer of 1817, Mrs. T. began to experience dull pains and a sensation of heat in the interior of the vagina. She complained of it to her husband, who made me acquainted with it, and

who much aided my exertions to obtain a full account of the case, by the manner in which he urged her to disclose all the circumstances respecting it. She at length, with extreme difficulty, acknowledged that, for five months past, the approaches of her husband had been the cause of very severe pain. She experienced a sensation of weight in the hypochondres, thrilling pains about the loins and in the groins, and occasionally painful dartings in the lower part of the abdominal cavity, and in the interior of the genital organs. As she was alarmed at these circumstances, (from the recent death of one of her friends, who, after symptoms which she said were similar, had been afflicted with cancer of the uterus,) Mrs. T. permitted me to make an examination of the seat of the disease.

"I found the neck of the uterus hard, unequal, and painful on the slightest pressure: the body of this viscus appeared to be larger than ordinarily, although pressure immediately on it, or above the pubes, did not shew it to be possessed of unusual sensibility. The finger caused a sensation of burning pain in the vagina. The patient had never had any other flux from these parts than the menses and the lochiæ.

"I directed that six leeches should be applied to the vulva, and two days afterwards the same number to the groins, and so on alternately, until they were counter-ordered; a hip-bath daily, made with a strong decoction of poppy-heads; an enema morning and evening, of a slight decoction of the fresh leaves of belladonna; an issue in the left arm; and the most severe restriction in diet, with total abstinence from wine.

"After this treatment had been followed for fifteen days, the pains were much diminished. The patient endured the restriction from food with the greatest impatience; but, on my insisting on the necessity of this measure, she consented to submit to it. Fomentations with the decoction of belladonna were made every evening to the hypogastrium, in addition to the other measures.

"On the 16th of July, the patient had become considerably emaciated; the pains were much less intense. The enemas and fomentation to be discontinued. The leeches were applied only once during the rest of this month. The same severity of regimen. The food consisted solely of vegetables,—as carrots, the fruits of the season, and about four ounces of bread daily. Her drink was merely water and lemonade.

"The 12th of August, the patient suffers no pain, either in the loins, the abdominal cavity, or the groins. The neck of the uterus has regained almost its ordinary size; it is soft, equal, and not painful on pressure; the sensation of burning heat is no longer experienced in the vagina. Menstruation has not appeared since a month before the treatment. The hip-bath to be continued; four grains of extract of cicuta to be taken daily; the abstinence to be less severe.

"The 8th of September, the little tumefaction of the neck of the uterus last noticed has totally disappeared. The treatment was here omitted, and the patient gradually resumed her ordinary regimen. I thought it my duty to represent to her husband the necessity of not

again using cohabitation. Since this time no accident has appeared; and I think I may assert that the affected is cured. ——

— "In all the cases I have related, it has been seen that I have insisted on abstinence from food to such an extent as to produce *sharp* hunger. The want of alimentation is one of the most favourable conditions for the cure of affections in which it is desirable to effect the re-entry into the circulation of the product of morbid accumulation of nutritive matter, in consequence of inflammation either acute or chronic."

The author concludes with observing, that he has found mercury very efficacious in fulfilling the latter intentions, when employed in the mode, and with the precautions, pointed out by physiology.

Medical and Philosophical Intelligence.

WE extract the following history from the Edinburgh Medical Journal (July 1819), as an illustration of the insidious progress of *chronic inflammation of the stomach:* the value of it consists in the salutary advice it should convey to the medical practitioner.

"John Davis, æt. 19, by trade a shoemaker, about three years ago became affected with pain and irritability of the stomach, so that little solid food could be taken without exciting uneasiness and sickness, with violent retching. However, nothing came from the stomach but a viscid mucus, or a watery fluid. From the frequency of these attacks during the last twelve months, he became thin, weakly, and unable to work at his trade. Often, within this time, the epigastric region acquired an excessive hardness and tumefaction. He had great pain and vomiting, which continued until two or three quarts of chocolate-coloured granulated fluid was ejected. After this he remained tolerably easy for ten days or a fortnight, when a recurrence of the same symptoms was experienced.

"On Christmas-day, after attending divine service, he complained, as usual, of his stomach. In the evening intense pain was felt in the epigastrium. He was exceedingly sick; and, with a view to excite vomiting, he drank warm water and chamomile-tea, and also took two active emetics; but these had no effect in evacuating the stomach. Pain, fullness, and extreme tension, increased, and extended to the whole abdomen. Injections *per anum* were administered, and anodynes given, without affording the smallest relief. At two o'clock the next morning he expired.

Examination.—The abdomen contained three or four quarts of a dark-coloured fluid. The omentum and intestines were vascular; and, with the peritoneum, exhibited numerous spots of extravasation. Towards the lesser curvature, and near the cardiac orifice, the stomach was mortified, and had given way to a considerable extent. The stomach was also unusually large, its coats thick, and the mucous membrane highly injected with blood. Near the pylorus, it was preternaturally hard, and set round with several whitish tumors, two of

which were as large as hazel-nuts. A section of the pyloric orifice showed this outlet very thick, unyielding, and contracted to the size of a common quill."

The last Number of the Journal above mentioned contains histories of three cases of *poisoning by arsenic*, related by Mr. M'Leod, which are interesting in several points of view; especially as they show the influence of severe disease of the stomach on the brain; and the results that ensued, in apparently desperate circumstances, from appropriate medical aid. The quantity of the mineral taken appears to have been but small; the patients were three female servants. The violence of the symptoms of inflammation of the stomach in the first instance subsided under the use of blood-letting, castor-oil as a purgative, carbonate of potash, sulphur, and the sulphuret of potash; but, on the third day these symptoms recurred, accompanied with firm closure of the jaws, and convulsions over the whole of the body. On the following day, Mr. M'Leod says, "we found Anne Murray in a state of apoplexy; breathing laborious, with convulsive startings all over her body; her jaws firmly locked; countenance pale and squallid; pulse 90, and feeble; and she was apparently insensible to external objects. We removed her to a cooler apartment, applied a large blister to the pit of the stomach, and another below the chin; took four ounces of blood from one of the jugular veins, and ordered her a strong injection. In about an hour thereafter she could move her jaws; when the physic [purgatives?] and sulphuret of potash were ordered as formerly. At twelve o'clock I sprinkled her face with cold water, which had the effect of rousing her out of the comatous state she was in. She spoke to us at one o'clock, and complained of a violent head-ach, together with heat and pain in her throat. The medicines were continued, and her feet were immersed for some time in warm water. She continued to recover the whole of this day.

"We found Kitty Macintyre speechless, without the power of swallowing, and with her hand carried constantly towards her throat; her face was flushed, her pulse 104 and full, which determined us to take some blood from her arm. Before an ounce came away, she spoke, and said, Thank God! I am relieved. We bled her to the extent of eight ounces; her medicines were repeated; and she continued tolerably easy during the evening, but occasionally complained of head-ach."

The third patient was in a nearly similar state, and was relieved by similar means.

On the following day, (the fifth from the time of taking the poison,) Mr. M'Leod says, "finding them all in a fair way of recovery, I took my leave for that day; but, at nine o'clock in the evening, Anne Murray and Kitty Macintyre were nearly at the same time both seized with violent head-ach, succeeded soon after by high delirium, being insensible of their own situation, unmanageable, and not knowing any of their attendants. They listened to what was said to them, but always gave foolish answers to any questions that were asked. I found them in this state at four o'clock of the morning of Tuesday the 21st; but, as their pulses were very feeble, I did not venture to take any

more blood. I gave to each of them a dose of salts, applied a large blister to the nape of their necks, ordered their feet to be immersed in warm water, gave them draughts of gruel with some nitre. But finding, after a trial of five hours of these remedies, that they did not receive the least benefit, (at the same time judging that these secondary symptoms indicated inflammation of the brain,) I determined to try the effects of the affusion of cold water. I accordingly poured some of this several times over the head of the strongest of them, (Kitty Macintyre;) kept at the same time a towel dipped in the cold water to her head. The effects were almost instantaneous: before the application of the water was continued for any length of time, a degree of shivering and gentle hiccough came on, when she recognized all in the room, became calm, and spoke perfectly sensibly. She said she had no pain, but felt a giddiness in her head, and general languor. Shortly after she fell asleep, and wakened quite composed. I tried the same remedy with some confidence in the case of Anne Murray, and the result was exactly similar. Marian Mylis, who was in a separate house, on hearing that the other two were delirious, became so also, though not in so violent a degree. She continued in this state from the preceding day till the affusion of the cold water was used; when the same happy result followed as in the other two cases. This treatment was continued for some days, together with some doses of physic. They gradually recovered strength, without any return of their complaints, from this date; and are now (three months after the accident) in good health."

We extract the following interesting case from the American Medical Recorder (vol. i.): it shows, in a very forcible manner, to what a degree derangement of the functions of the brain will extend, from congestion of blood in that organ, without organic lesion. The rapidity of the recovery evinces the correctness of the latter remark.

"I was called, (says Dr. Meigs,) at half-past three o'clock, P.M. on the 18th of June, to see a boy four years old, a fine healthy child as to shape and stature. He had been playing all the morning in a field where his father was mowing. At twelve o'clock he came home, and complained of fatigue and drowsiness; for which his mother sent him into an upper room to sleep. No notice was taken of him till half an hour before my visit, when he was discovered lying on his back quite insensible. His father procured a bleeder, who abstracted about six ounces of blood from his arm, which seemed to have no effect in lessening the violence of the attack.

"When I saw him, he was lying on his back, his countenance pale and death-like, his eyes half-closed, and utterly insensible to common impressions. The corners of his mouth were occupied with a frothy mucus, which was flowing out along with considerable quantities of a brownish fluid. His pulse was yet quite full and strong, though very slow. There was no rigidity of any of the muscles at first, but I at length observed a convulsive clenching of the hand; his abdomen was not swollen, but quite soft and yielding; his breathing performed with some labour, and stertorous.

"I gave him half a tea-spoonful of assafœtida in water, which was swallowed with some difficulty. Sinapisms were applied to the feet; and I laid pounded ice on his head, while cups (with the scarificator) were applied to his temples. He took five grains of calomel, which he could hardly get down, as the function of swallowing was exerted with much difficulty. He started a little when the cupping-lancets struck him, but did not seem to feel the cup.

"In less than an hour my patient was looking about him with much animation, and apparently well of every thing but the cupping scars and sinapisms, of which he complained. He took an ounce of castor-oil, to quicken the operation of the calomel.

"*At* 9, P.M.—He has been sitting up; and I now find him in a placid deep sleep, with a natural pulse and a moist skin."

Dr. Meigs, in his judicious remarks on this case, says, there was no reason to believe that any deleterious substance had been swallowed: he was disposed to attribute it to the influence of the rays of the sun, "during the whole forenoon, on the little fellow's bare head."

M. Esquirol lately communicated to the Société Medicale of Paris, an account of a girl who had been hypochondriacal for a long time, and had a disposition to destroy herself. She had been paraplegic for four years, and used crutches: these she threw aside a few hours before her death, walked round the wards of the hospital several times, and then threw herself out of a window. On opening the body, there were found two enormous cysts in the liver,—one in the great lobe, and the other, as it were, placed between the diaphragm and the liver: they contained a large quantity of hydatids. There were several other little cysts also containing them. The largest cyst had contracted adhesions by its superior surface with the diaphragm, which itself adhered to the lungs. The left ovary also contained several hydatids.*

M. Cullellier has found a great number of hydatids in an exostosis of the tibia, which escaped from it by an opening made into the tumor by the actual cautery.

About a hundred and fifty hydatids have been found in the vertebral canal of an epileptic patient.

In a large cyst found in the body of a carrier, who died from accident, there were found numerous hydatids, contained within each other. It was supposed by the anatomist, that the little bubble which rose from a certain point of them, whenever the vessel containing them was moved, was the sucker of the animal.

M. Roux took this occasion to mention that he had recently extirpated a large tumor from the breast of a female, which contained a numerous collection of hydatids, without being accompanied with other appearance of disease of the parts.—*Procés verbaux de la Société de Medecine,* seance du 20 April, 1819.

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* No notice is taken of the state of the brain and spinal marrow in the report from which the above is extracted. It is probable that hydatids had existed in one or other of them, causing the paralysis; and we may imagine that this affection had been removed by the bursting of them, in consequence of which the compression they had caused may have been removed.—Edit.

The following curious case is taken from the American Medical Recorder: it is related by Dr. Henkel, of Shenandoah county, Virginia.

"On the 31st of May, 1817, a man, about 23 years of age, applied to me to have a tumor extirpated, situated about half an inch above his left eye-brow. It was somewhat larger than a pigeon's egg, and had commenced its growth when he was about nine years old. It was not at all painful, nor was the skin over it discoloured, or otherwise altered. On removing the tumor, and cutting into the sac, I was surprised to find its contents consisted of hair, resembling in every respect those of his eyebrows. After extracting them, I found the inner surface of the cyst covered with hairs, which grew from it. The tumor was no doubt occasioned by the old hairs falling off, and being retained in the cavity."

We in the last Number gave an account of the extent of the distribution of vaccine virus from the *National Vaccine Institution*; that from the *London* has been not much inferior. Dr. Walker has distributed, since the last Annual Report, 31,613 charges of matter to 6,223 applicants; and has himself inoculated, within the same period, 2,821 children: the appointed inoculators in the metropolis and its environs, of the same Institution, have inoculated 16,926. Yet, notwithstanding the exertions of those Institutions, small-pox continues to appear. Dr. Walker says, in the same Report, that "almost every day's mails bring urgent applications for vaccine ichor by return of post, from different parts of the United Kingdom, in consequence of the small-pox still existing in the country." It is, however, gratifying to find that the benefits of vaccination have at length extended to almost every part of the world; that the practice is progressively becoming more generally resorted to by every nation; and every year continues to render more firm the reliance that has ever been rationally placed on its prophylactic power.

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REPORT OF DISEASES.

DURING the early part of the last month, the ordinary diseases of the season prevailed, as diarrhœa, dysentery, intermittent and remittent fevers, especially in children; and hepatic derangement, more or less of an inflammatory character. But the remarkable change that took place about the middle of the month, has brought on the winter epidemics in a very extensive manner, and with unusual severity. Many of those who were suffering diarrhœa and dysentery, have acquired intermittent fever,—an observation made by Morton under analogous circumstances; and many of the more delicate females have become dropsical. Rheumatic affections of the lower extremities have also, in several cases, been complicated with intestinal disorder: these are cases which require much caution and judgment in their treatment. A gentle diarrhœa, either spontaneous or produced by art, has appeared to be the most salutary occurrence, especially in the early stages of the complaint: in the later ones, it has not been productive of much advantage. Inordinate evacuation by the urinary passages has then been most decisive; especially when the urine has been high-coloured and contained albumen.

Inflammation of some part of the respiratory organs, especially of the mucous membrane of the lungs, has been the most common form of fresh attacks of disease. This is more frequently productive of future than immediate fatal consequences: it is the most common cause of phthisis in persons not predisposed to that disease. When the inflammation has totally or nearly subsided, and cough with copious expectoration remains, unalleviated by ipecacuanha, squills, digitalis, and regularly-repeated purgatives every third or fourth day, we have found, in many cases, great benefit derived from balsamic medicines, especially copaiba and turpentine. These are remedies that are too much neglected; but the use of them requires great vigilance in observing their effects.

Croup, and inflammation affecting the trachea more extensively, have been rather prevalent in children, in the northern and eastern districts; and the former affection has been of an intense inflammatory character generally. It is of some importance, in respect to the treatment of this complaint, to ascertain whether or not the voice and respiration are constantly equally shrill and sonorous; as, when this varies much, the child occasionally breathing somewhat freely, especially during *sleep*, which rarely takes place in the more inflammatory species, and if it does happen, the respiration is then more stetorous, it is not advisable to have recourse to such extreme depletion as in the other form of the disease: here, after one venesection, or leeches once applied to the throat, a blister, with active purgatives of calomel and jalap, will soon remove this affection. The constriction of the glottis in these cases, is probably, in a great measure, dependant on functional contraction.

Acute rheumatism, occurring apparently idiopathically, has been common. When we compare the effects of opium, bark, and heating sudorifics, nearly the sole measures employed by most of our forefathers in this disease, with those resulting from bleeding, antimony, cool air and drinks, &c. now generally employed, we know not how the former class of remedies came to be considered beneficial: but many circumstances seem to show that the diseases of the inhabitants of London have of late years assumed a more inflammatory character than they did formerly; though we must not forget, that rheumatism is a term applied in an extremely vague manner, and to affections of the pathology of which we know but very little, that can be considered as precise knowledge.

METEOROLOGICAL JOURNAL.

By Messrs. William Harris and Co. 50, Holborn, London.

From September 20 to October 19, inclusive.

Day of Month.	Moon.	Rain guage.	Therm.			Barom.		De Luc's Hygrom. Dry	Damp		Wind.		Atmospheric Variation.		
Sep.															
20			53	60	46	30·33	30·38		9	8	NE	NE	Fine	Cloud.	Fine
21	●		51	61	52	30·46	30·45		9	8	ENE	NE	Fine		
22			57	60	52	30·43	30·40		8	9	E.	ESE	Fine		
23			57	62	54	30·23	30·07		9	8	ENE	E	Foggy	Fine	Fine
24			58	63	53	30·02	29·78		11	9	SE	E	Fine		
25		,32	58	60	53	29·63	29·58		13	12	E	SW	Rain		
26	☾	,13	57	59	54	29·56	29·71		11	15	SW	SW	Fine	Rain	Cloud.
27		,44	59	61	59	29·63	29·67		15	16	WSW	SW	Cloud.	Cloud.	Rain
28		,40	64	65	60	29·63	29·70		17	16	WSW	SSW	Rain	Cloud.	Cloud.
29		,16	61	62	58	29·60	29·76		17	17	SW	SW	Rain	Rain	Cloud.
30			63	66	62	29·83	29·86		17	16	SW	SW	Cloud.	Fine	Fine
Oct.															
1			66	70	62	29·83	29·80		15	15	SW	SW	Fine		
2			65	68	61	29·70	29·83		17	15	SW	WSW	Fine		
3	○	,06	64	64	56	29·76	29·64		15	15	SW	WSW	Cloud.	Rain	Fine
4		,04	61	62	42	29·58	29·73		14	10	W	N	Cloud.	Sho'ry	Fine
5			45	56	45	29·94	30·16		8	8	N	NW	Fine	Fine	Cloud.
6			54	56	54	30·13	30·00		9	11	W	NW	Cloud.		
7			57	62	58	29·90	29·95		15	15	W	W	Cloud.		
8			60	64	59	30·03	30·04		16	17	W	SW	Cloud.		
9			61	67	59	29·97	29·76		16	15	SSW	SSW	Cloud.	Fine	Cloud.
10			65	68	60	29·83	29·84		15	15	SW	S	Fine	Fine	Cloud.
11	☽		63	68	58	29·87	29·94		16	14	SE	SW	Fine		
12			65	69	60	30·00	30·05		15	15	S	SE	Fine		
13			65	69	54	30·00	30·05		16	12	SW	NW	Cloud.	Cloud.	Fine
14		,05	57	60	51	30·10	30·18		15	10	W	NNW	Cloud.	Cloud.	Sho'ry
15			57	62	45	30·30	30·34		12	11	NNE	E	Fine		
16			53	67	42	30·24	30·14		11	10	WNW	NW	Cloud.	Cloud.	
17			47	55	41	30·14	30·20		9	9	N	N	Fine		
18			45	48	39	30·20	30·20		11	9	NE	N	Fine		
19	●		47	50	51	30·10	29·94		10	12	NW	SW	Cloud.	Cloud.	Fine

The quantity of rain fallen in September, is 2 inches and 11-100ths.

*** *We request our readers to correct an error in a calculation of the relative mortality from parturition and its express consequences, which appeared in the 256th page of this volume. That calculation was made from partial statistical accounts, and chiefly from Hospital records in different parts of Europe. On a more full and correct enquiry, we find it to be in the proportion of about one in one hundred. According to the Bills of Mortality, the proportion in* London *for the last year was* one *in* 109; *and this has been nearly the average proportion during the last twenty or thirty years.*

Read, also, page 237, 6 lines from the bottom, perceptible *for* forcible.